# STATUS OF PLANS FOR 1990 DECENNIAL CENSUS: AN UPDATE

## HEARING

BEFORE THE

SUBCOMMITTEE ON
CENSUS AND POPULATION

OF THE

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POST OFFICE AND CIVIL SERVICE
HOUSE OF REPRESENTATIVES

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# STATUS OF PLANS FOR THE 1990 CENSUS: AN UPDATE

THURSDAY, MARCH 23, 1989

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON CENSUS AND POPULATION,
COMMITTEE ON POST OFFICE AND CIVIL SERVICE,
*Washington, DC.*

The subcommittee met, pursuant to notice, at 9:37 a.m., in room 311, Cannon House Office Building, Hon. Thomas C. Sawyer (chairman of the subcommittee), presiding.

Mr. SAWYER. I will call the subcommittee to order this morning. Our hearing this morning is on the "Status of Plans for the 1990 Census: An Update," and our witnesses this morning will include Mr. Gene Dodaro, who is the Associate Director of the General Government Division of the General Accounting Office, and Mr. C. Louis Kincannon, Deputy Director for the Bureau of the Census.

Good morning. On behalf of the Subcommittee on Census, I would like to welcome you to our first oversight hearing of the 101st Congress.

It has been six months since Congress has held its last oversight hearing on the status of preparations for the 1990 census. Since then, the subcommittee has gained several new members, including myself and the distinguished Ranking Minority Member, Congressman Ridge, who will be joining us shortly.

The Senate also has created a new subcommittee with a new chairman to oversee Census Bureau activities. There may be new faces and new players overseeing plans for the upcoming census, but there is really not a lot of time to stand back and observe from the sidelines.

About a year from now, 106 million census questionnaires will be mailed, destined for every household in the country. By that time, census forms must be printed and prepared and mailing address lists for nearly every housing unit in the country must be compiled and checked for accuracy. Nearly 500 district and processing offices must be opened, equipped, and staffed. A temporary workforce of over 400,000 must be recruited and trained.

Clearly, the final year of preparation before the census day presents a task of staggering size and complexity.

Since the first Census Act 200 years ago, this country has conducted a census every ten years without fail. I have little doubt that the 21st census in 1990 will be carried out and completed in an admirable manner. But, simply getting through the census, of course, is not enough and is not the goal of any of us.

The accuracy of the population counts and related data on population and housing characteristics will determine the distribution of political power at the state and local levels in the state, and at the Federal level, and the allocation of billions of dollars in scarce Federal resources, throughout the next decade.

The ability of legislators, governors, mayors, city planners, and other public officials to develop worthwhile policies and programs hinges on the accuracy of the profile of our nation, which the census will provide.

Our nation has carried out enough censuses to have learned valuable lessons about how to manage best these enormous undertakings. The question is whether we have applied these previous experiences to improving the efficiency and management of the census for 1990 and beyond.

The Census Bureau has made great improvements for 1990, particularly in the area of automated data processing. But I am concerned that past experience in the areas of cost containment and hiring may not have been as fully analyzed as necessary in an effort to improve operations for 1990.

The cost of the census has more than doubled since 1980. We will hear testimony this morning from the General Accounting Office, which indicates that even the current cost estimates may not be sufficient, given anticipated problems in recruiting an enormous temporary workforce.

Clearly, we simply cannot afford to wait until this time next year for the Census Bureau to discover a serious funding shortfall, which could jeopardize the quality of census data and the availability of data products after the census.

Now is the time to identify specific operations which may require additional funds, as well as operations which can be managed more efficiently or perhaps reduced in scope, in an effort to contain costs without jeopardizing quality. It is also the time to determine why certain problems recur and to implement immediate actions to avoid the same problems in the future.

I cannot over-emphasize that latter point.

In the 1988 census dress rehearsal, the turnover rate for enumerators was 83 percent. It seems to many of us that decisions must be made now which will improve this situation for the actual census next year.

Under the Constitution, the Legislative Branch of government is charged with the duty of taking a census. Congress has delegated that responsibility to the Bureau of the Census. Fortunately, Congress and the Census Bureau have a mutual goal—obtaining the most accurate count of the population possible.

To reach that goal, we must make timely decisions and develop a range of alternative options which will lead us in the right direction.

I urge the Census Bureau to take the opportunity today to share with the subcommittee the exact status of the final preparations for 1990. We would like to know about operations that are proceeding according to plan, efforts to improve difficult operations, and problems which conceivably may require intervention or assistance from the Congress over the course of the next year.

The Census Bureau has been encouraged, finally, to develop a contingency plan, which sets forth alternative ways to carry out certain operations should planned procedures not work as anticipated. We would very much like to know about this plan.

We would also like to know what operational improvements the Bureau intends to make based on its analysis of the 1988 dress rehearsal in St. Louis.

I have every confidence that an open and honest relationship between the subcommittee and the Census Bureau will contribute enormously to our mutual goal of improving the accuracy of the census. I am hopeful that we can firmly establish that relationship this morning.

Also a new member of the committee and the subcommittee is Congressman Chandler.

Congressman, do you have any comments you would like to make this morning?

Mr. CHANDLER. Good morning, Mr. Chairman. I do not.

I look forward to the hearings. This is my first hearing on the Post Office and Civil Service Committee, so I am pretty high on the learning curve.

I appreciate the warm welcome.

Thank you.

Mr. SAWYER. Thank you.

[Upon request, the opening remarks of Congressman Ridge follows:]

**Opening Remarks of Congressman Tom Ridge,**

**Ranking Minority Member**

**Subcommittee on Census and the Population**

**March 23, 1989**

I would first like to thank the Panel for appearing before us this morning. As a new member to this Subcommittee, I am looking forward to learning more about the 1990 Decennial Census and the Bureau who makes it happen.

Over two hundred years ago, a group of gentlemen recognized the need to count the population of their new country. This number would be used to distribute the powers of government to those who would be governed. This group of men found the thought of counting the population so important, they included it in their blueprint of the new nation - - the Constitution.

Article I, section 2 provides for a census to be taken for purposes of apportioning of Congressional seats. This is the only constitutionally mandated purpose of the census. However, this count has taken on new duties as time has passed. From federal funding of housing to statistics on minority populations, the census is our encyclopedia of the American people.

The Census Bureau, who is testifying before this Subcommitte, bears the tremendous responsibility of carrying out the Decennial Census. Today, we will be studying what costs and procedures will be necessary to conduct an efficient, accurate and timely Census. We will be touching on issues unique to the Census Bureau, employer of one of the largest, temporary workforces in the United States. With the assistance of the General Accounting Office, we will explore budgetary impacts and procedures used in carrying out the decennial census. I look forward to working with you to make certain that the 1990 Census runs smoothly and to help increase participation in the process.

Mr. SAWYER. With that, I would like to call our first witness this morning, Mr. Gene Dodaro, Associate Director of the General Government Division of the General Accounting Office.

Good morning, Mr. Dodaro. Would you introduce your co-workers for the record, please.

**STATEMENT OF GENE L. DODARO, DIRECTOR, GENERAL MANAGEMENT ISSUES, GENERAL GOVERNMENT DIVISION, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY CHRISTOPHER MIHM, EVALUATOR; AND JACOB KAUFMAN, SENIOR EVALUATOR**

Mr. DODARO. Good morning, Mr. Chairman.

On my left is Mr. Jack Kaufman, who has been responsible for overseeing our work at the Census Bureau for a number of years.

On my right is Mr. Chris Mihm, who is responsible for monitoring the personnel issues associated with taking the census.

With your permission, Mr. Chairman, I would like to have our prepared statement submitted for the record and to briefly summarize our overall observations.

Mr. SAWYER. Without objection.

Mr. DODARO. In summary, we think the Bureau has made a number of positive strides in preparing for the 1990 census. For example, the dress rehearsal showed that the Bureau has made some major improvements in automating the production of maps and checking in questionnaires. These efforts replaced the slow and error-prone manual operations used in the 1980 census.

The Bureau also has implemented concurrent processing of its questionnaires. This procedure will allow the Bureau to capture data on automated files while questionnaires are being received. It allows more time for review and may improve data quality and expedite publication.

However, as the Bureau continues to prepare for 1990, three critical areas require greater attention: first, containing escalating costs; second, recruiting and retaining the over 400,000 temporary workers needed; and, third, continuing to improve census automation.

I will briefly elaborate on each of these three issues.

First, controlling costs.

We believe the Bureau's estimate of $2.6 billion for taking the 1990 census is not complete. The Bureau has not fully incorporated prospective cost increases, such as geographic pay rates and inflation.

Historically, the Bureau has had difficulty controlling costs without compromising data quality. The Bureau ran out of funds during the 1980 census, and needed a $50 million supplemental appropriation. Operations also were scaled back in certain areas, impacting data quality and slowing dissemination of publications.

Cost estimates for 1990 are following a similar pattern.

In 1985, the Bureau estimated that the census would cost $1.8 billion in 1990. In 1986, the estimate was raised to the $2.6 billion figure, a 44 percent increase.

We believe that the census, as planned, would cost about $3 billion.

The Bureau's approach to identifying reductions to date has not addressed the magnitude of the potential shortfall nor comprehensively identified program priorities. The Bureau has made some reductions totalling at least $40 million. These reductions should help. But the Bureau needs to make decisions on program priorities. Early decisions are needed to avoid cutbacks more drastic than occurred in 1980 and to minimize the need for a supplemental appropriation.

Let me now turn to the very important area of recruiting and retaining a quality work force.

Staffing traditionally has been a chronic problem for the Bureau. During the 1980 decennial, about 30 percent of enumerator positions were unfilled during peak operations. Turnover rates were as high as 74 percent.

The Bureau anticipates even more difficult problems for 1990. It will need to recruit over 1.6 million applicants for positions in district offices. This is about 45 percent more than in 1980.

The Bureau must address two major staffing challenges. These include providing competitive pay and expanding the supply of applicants.

Early census operations for 1990 demonstrate that the Bureau's planned pay rates may not be adequate to attract needed staff. Inadequate pay contributed to staffing problems during prelist operations. Twenty-eight percent of areas reported recruitment problems.

In addition, turnover was over 60 percent, or more than twice what the Bureau had anticipated.

To complete the prelist, the Bureau was forced to raise enumerator pay from $5.50 per hour to $8.00 per hour in six East Coast areas.

The Fiscal Year 1990 budget request seeks $21 million for more competitive pay rates. These increases should improve the Bureau's competitive position, but still will probably not be enough to adequately attract a significant number of employees.

Consequently, the Bureau is reviewing various options, including a full-scale geographic wage rate structure.

We support the Bureau's efforts to make its pay structure sensitive to local labor market conditions. However, we believe that a final decision on its 1990 pay structure needs to be made soon, so that recruiting efforts are not hampered.

The Bureau also needs to undertake efforts to expand the labor supply. The labor pool available for census employment is smaller than in prior decennials. We believe that legislation that would enable Federal retirees to work on the census without reductions in their retirement benefits should be given serious consideration.

The final point I want to emphasize is that the Bureau needs to continue to make progress in improving automation.

As I noted in the early part of my statement, the Bureau has made progress in automating key census activities. However, some automated reports in early operations were not available or accurate due to untested software.

For example, management information reports on costs and progress could not be produced as intended. These reports would be very important to monitoring census operations because during the

peak activities, the census will be spending about $1 million an hour. So it needs to have adequate information to stay on top of those costs.

Additionally, the automated applicant file did not always work. Given the rapid turnover in the census employees, the Bureau needs to be able to quickly determine potential replacements for those people. So it's important that that system work as intended, as well.

The Bureau has taken a number of actions to improve its automation efforts.

As you mentioned in your opening statement, Mr. Chairman, in response to our recommendation, the Commerce Department reports the Bureau is preparing a contingency plan and that plan should be available soon. We think that it is a really good idea.

In closing, we feel the Bureau is making progress in a number of key areas, considering the inherent difficulties in taking the census. However, the Bureau must address some critical issues in the immediate future to ensure a cost effective and well managed census.

In particular, we must directly confront the cost issue and ensure that we have a competitive pay structure to obtain the workers needed.

We will continue to monitor the Bureau's progress and keep the subcommittee informed.

That completes my prepared statement.

We would be happy to answer any questions.

[The statement of Mr. Dodaro follows:]

Statement of
Gene L. Dodaro, Director,
General Management Issues
General Government Division

Mr. Chairman and Members of the Subcommittee:

I am pleased to appear today to discuss our observations on the status of the decennial census. My comments are based on the results of our reviews of the Census Bureau's fiscal year 1990 budget request, which at $1.3 billion represents about one half of the estimated $2.6 billion full-cycle census costs; the 1988 dress rehearsal, which was the Bureau's final opportunity to test procedures and operations under census-like conditions; and the prelist operations, in which the Bureau is developing the 1990 address list for suburban and rural areas.

The Bureau has made some positive strides to improve its operations for the 1990 census. For example, census data will be processed earlier, which will allow more time for quality checks. The Bureau also has automated some error-prone manual operations, such as the preparation of maps, to overcome significant problems experienced in the 1980 census.

Three key areas, however, will continue to challenge the Bureau throughout the census. These entail

-- containing escalating census costs without significantly compromising data quality;

-- attracting and retaining the over 400,000 temporary employees needed; and

-- making further improvements in the automation of census operations.

CONTROLLING CENSUS COSTS

Controlling decennial costs without compromising the quality of the data has been a longstanding dilemma for the Bureau. For the 1980 census, cost estimates rose significantly during the 5 years preceding actual operations. In 1975 the Bureau originally estimated the 1980 census would cost $450 million. The estimate rose to $565 million in 1977, and in 1980 it jumped to $1 billion. The 1980 census eventually cost about $1.1 billion. Because the Bureau had underestimated costs for 1980, it ran out of funds during the census, disrupting operations and requiring $50 million in supplemental appropriations.

The funding shortfall in 1980 also prompted actions that reduced data quality and slowed dissemination of some publications. For example, the Bureau reduced the number of staff who coded the data from census questionnaires, contributing to a delay of about 1 year in the publication of some data on population characteristics. In addition, one half of the data for some population characteristics was not coded at all, diminishing the usefulness of certain census publications.

Similar to 1980, cost estimates for the 1990 decennial have escalated in recent years. The Bureau's initial objective was to keep the 1990 per housing unit cost no higher than the 1980 level, after adjusting for inflation. Using this objective, the Bureau estimated in 1985 that the 1990 census would cost $1.8 billion. In 1986, however, the estimate was raised to $2.6 billion--a 44-percent increase. On the basis of continued inflation and more current cost estimates, we believe that the 1990 census, as planned, will cost about $3 billion.

To keep the cost within its $2.6 billion estimate, the Bureau has begun to make reductions. So far Bureau officials have identified savings totaling more than $40 million. These include:

-- scaling back pay increments and eliminating proposed geographic pay scales for processing office personnel, accounting for $23 million, because to date the Bureau has not experienced problems in attracting and retaining staff for these offices;

-- scaling back staff and travel funds for decennial promotion activities, amounting to $1.1 million; and

-- decreasing data editing of population characteristics in the Nation's most rural areas, totaling $5 million.

The Bureau also has targeted other program reductions but, as of yet, has not calculated the exact savings to be accrued. For example, the Bureau decreased the number of first-line supervisors, increasing the ratio of enumerators to their supervisors from 8:1 to 9:1 or 10:1, depending on the type of office. Reducing the level of supervision could have an impact on production and data quality.

In addition, the Bureau has decided not to update its new automated geographic files for 1990 to incorporate changes, such as new streets noted in its field canvassing activities. Although these changes will not affect the completeness of the population counts, the maps used by localities to check the accuracy and completeness of preliminary census counts might not show recently built streets. This may create a perception among local officials that census counts are inaccurate. In addition, the published census maps will not contain the most current geographic information.

As the Bureau moves to contain costs, it simultaneously faces additional financial pressures, such as the need to raise its 1990 pay scale for district offices. As I will discuss later, the Bureau recognizes that in many areas, its pay rates are not competitive. To improve its competitive position, the Bureau is considering adopting geographic wage rates based upon its

analysis of local labor markets and an identification of competitive pay rates for each of its over 450 district offices. While the Bureau has included a $21 million line item for pay increases in its fiscal year 1990 budget request, we believe this may not be sufficient to attract needed employees. Even if the $21 million increase is approved, as many as 69 percent of the Bureau's district offices would still be left with pay rates below the competitive levels established by the Bureau's geographic pay analysis.

We believe that the Bureau's $2.6 billion cost estimate is not complete or realistic. The Bureau has not fully incorporated prospective cost increases, such as geographic pay rates and inflation. Moreover, its current approach to identifying cost reductions, while helpful, has not directly confronted the magnitude of possible funding shortfalls. We believe that if the census is done as planned, the shortfall could be about $400 million.

The Bureau needs to make a complete cost estimate and determine program priorities while time affords some flexibility. The Bureau needs such a list of program priorities to aid in making the difficult funding decisions that it confronts. The failure to make funding decisions now could force cutbacks in census operations more drastic than occurred in 1980 and compel the Bureau to request supplemental funding.

BUREAU NEEDS TO ADDRESS STAFFING DIFFICULTIES

Problems in attracting and retaining a quality workforce historically have plagued decennial census operations. During peak operations in 1980, for example, the Bureau was unable to fill 30 percent of its enumerator positions and suffered from turnover rates as high as 74 percent. Staff shortages and high turnover can lead to additional recruitment and training costs, as well as contribute to delays in completing activities.

The Bureau faces equally severe challenges in 1990. To help ensure sufficient staff, the Bureau anticipates that it will need to recruit at least 1.6 million applicants for district offices in 1990, or about 45 percent more than the Bureau needed in 1980. This increase is due to several factors, including an estimated increase in the number of housing units, an expected mail response rate lower than in 1980, and anticipated high job refusal and turnover rates.

Implementing Competitive Pay Rates

The most fundamental staffing challenge confronting the Bureau is ensuring that its pay rates are competitive. Problems in staffing early field activities for 1990 demonstrated how inadequate pay could hamper recruitment and retention. For example, the Bureau reported that over 29 percent of the prelist



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areas had difficulties in meeting recruiting and staffing goals. In addition, according to a Bureau official, the turnover rate was over 60 percent, or more than twice what the Bureau had expected. While all of the staffing difficulties cannot be attributed to pay, inadequate compensation appeared to have played a major role in some areas, according to reports from the Bureau's regional recruiters.

To meet prelist staffing needs, the Bureau raised its enumerator pay in six east coast areas from $5.50 to $8.00 per hour--a 45-percent increase. The Bureau has not yet evaluated the effect of the pay increase on census costs or productivity, but the Bureau believes that the higher pay rate increased the number of applicants. For example, in Northern Virginia, 200 persons had been recruited before the pay increase. However, in the 2-week period after the pay increase was implemented, 500 applicants were recruited.

The Bureau has initiated two major efforts to improve the competitiveness of its pay rates for 1990. First, as noted earlier, the Bureau is requesting $21 million for pay increases in district offices. According to Bureau officials, under the Bureau's fiscal year 1990 budget request, all district offices would receive a 2 percent pay increase. In addition, 60 of the district offices that are the most difficult to staff would receive additional increases of either 10 or 20 percent. As a

result, for most offices, enumerator pay would increase to about $5.60 per hour, while in the 60 most difficult offices it would be either $6.72 or $7.32 per hour.

Second, the Bureau is reviewing the implications of a full-scale geographic wage system with six different rates. As currently envisioned, the proposal would pay enumerators between $5.50 and $7.50 per hour depending on where they work. An $8.00 per hour rate would be reserved for district offices that suffer from extreme staffing shortages.

We have previously encouraged the Bureau to consider a geographic pay system that is more sensitive to local market conditions.[1] The Bureau has to date not reached a final decision on the design of its 1990 pay system. It needs to decide soon so that it has the time and flexibility to address the cost implications of its approach. Moreover, continuing indecision about pay could interfere with the schedule for hiring activities for 1990, such as developing, printing, and distributing recruitment materials. In addition, because of problems it has had in the past, the Bureau needs to test changes to its pay system to ensure that it can effectively administer a geographic wage system on a nationwide basis.

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[1]Status of the 1990 Decennial Census, (GAO/T-GGD-88-53, Sept. 27, 1988).

Increasing the Number of Job Applicants

Better pay alone will not solve all of the Bureau's staffing problems. The Bureau now faces a diminished labor pool compared to the one available in prior decennials. Moreover, the nature of decennial work is unattractive to many potential employees. Census employment is temporary, in most cases lasting several weeks; most positions do not earn benefits; and access to an automobile is required for many field positions.

The Bureau needs to aggressively pursue ways to increase the availability of its labor supply. Federal retirees are an important potential source of census employees that has not been used. Our September testimony suggested that the Bureau consider proposing legislation that might encourage retirees to accept temporary employment for the decennial without reductions to their federal retirement benefits. We continue to believe that this option should be thoroughly explored.

The Bureau also could improve its staffing capability by undertaking more intensive and comprehensive efforts to evaluate the causes of its recruitment and retention difficulties. The Bureau does not systematically collect and analyze data to determine the specific causes of its staffing problems. For example, the Bureau does not attempt to determine exactly why its temporary employees quit. Collecting this information might

enable the Bureau to better design strategies to attract and retain needed staff. Additionally, by reducing turnover, the Bureau saves funds that would have been spent on additional recruitment and training.

## DRESS REHEARSAL AUTOMATION EFFORTS SHOW MIXED RESULTS

Greater use of automation is one of the Bureau's major improvements for 1990. In 1980, the Bureau relied extensively on manual operations that were both slow and error-prone. Increased use of automated data processing (ADP) can help improve data quality by reducing errors and should enable the Bureau to better monitor and control costs and productivity information. Enhanced use of ADP offers the Bureau both opportunities and significant management challenges. This was illustrated by the mixed results of the 1988 dress rehearsal.

The dress rehearsal demonstrated that the Bureau has made a number of positive strides in automating key operations. For example, the Bureau successfully automated procedures to record the receipt of census questionnaires, produce maps, and edit some questionnaires for completeness. The Bureau also was successful in capturing data on automated files as questionnaires were being received, which was not the case in 1980. For 1990, this will allow more time for data review, which may ultimately

improve data quality and accelerate data dissemination.

However, the Bureau was not as successful in implementing other critical ADP efforts in the dress rehearsal. As we have reported, the Bureau experienced delays in procuring minicomputers that were to be used to complete a variety of data gathering and control activities, including keying addresses and producing management information reports.[2] These delays occurred because of late decisionmaking and bid protests. As a result, the value of the dress rehearsal was diminished because the Bureau was unable to fully test critical software under census-like conditions.

In some cases, management information systems did not work as expected. For example, reports from systems that were designed to assist field managers in hiring employees and monitoring census costs and progress were not always available, accurate, or useful. These problems continued in the early part of prelist.

Thus far, the Bureau has been able to complete initial 1990 census activities despite problems with some of its management information reports. In these cases, the Bureau relied on manual operations and special assistance from headquarters ADP staff. However, such solutions may not be feasible during the actual

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[2]DECENNIAL CENSUS: Minicomputer Procurement Delays and Bid Protests: Effects on the 1990 Census (GAO/GGD-88-70, June 1988).

decennial because the census is a much larger effort than either the dress rehearsal or prelist.

We recommended in our 1988 minicomputer report that the Bureau develop an operations contingency plan in the event that some of its automated systems do not function as intended in 1990. The Commerce Department agreed with our recommendation and reports that it is making progress in developing the plan. It expects to have the plan completed by the end of April.

The Bureau has taken a number of other actions to address problems with its ADP efforts. For example, the Bureau established a systematic process for resolving regional census problems with automated management reports. The Bureau also has streamlined the automated applicant file to eliminate a number of reports that either were not useful or had proven difficult to develop in a useful format.

In closing, Mr. Chairman, considering the inherent difficulties in taking a census, we feel the Bureau is making progress in a number of key areas. However, as I have noted, the Bureau must address some critical issues in the immediate future in order for the Nation to have a cost-effective and well-managed census. We will continue to monitor the Bureau's progress throughout the decennial census and will keep the Subcommittee informed.

Mr. SAWYER. Thank you, Mr. Dodaro.

The Census Bureau maintains that the 1990 census will cost $2.6 billion. You indicated in your statement that you feel that this cost estimate is unrealistic and that the actual cost could well be closer to $3 billion.

On what basis did you arrive at that $3 billion figure?

Mr. DODARO. The $2.6 billion estimate was basically made in 1986 dollars. So we feel adjusting for continued inflation, is the first basis for making a $3 billion estimate.

Secondly, the Bureau is going to have continued pressures to come up with a competitive wage rate structure, and we feel that's also going to push costs up slightly.

Also, the $3 billion estimate is based upon some more current cost estimates that the Bureau made subsequent to the 1986 $2.6 billion estimate.

So we feel those three, the combination particularly of continuing inflation and additional pressures to come up with a competitive wage rate structure, is going to push the cost higher than $2.6 billion.

Mr. SAWYER. You also mentioned that the Bureau has begun to undertake some cost saving measures. Could you share with us your sense of the total scale of those measures and their adequacy?

Mr. DODARO. They have undertaken in total about $40 million in reductions so far.

Essentially, some of the reductions basically revolve around scaling back some of the pay for processing office personnel, because the Bureau has not had problems to date recruiting people in the processing offices. That would save approximately $23 million.

Also, they plan to scale back some outreach and promotion activities, in certain areas. That is estimated to save about $1.1 million.

They also plan to decrease data editing of certain population characteristics. So some of the information that they will receive won't be scrutinized as much as they would have otherwise. That is estimated to save about $5 million.

Essentially, those are the major reductions so far that they have identified.

They also have identified some other potential reductions in certain areas, and this particularly relates to the proportion of enumerators to supervisors. They had originally planned to use an eight to one ratio for 1990. But they are going to increase that ratio to nine to one or ten to one in certain areas. So they will have more employees per supervisor than they originally planned.

Now, despite the increase from the eight to one to ten to one in certain areas, it is still better than what they had in 1980, which was, essentially, a twelve to one ratio.

The Bureau has been trying to make sure, in making these reductions, that they don't go below the 1980 level. While that, on the one hand, is good, because we're not going to be doing anything that is below the 1980 level. However, you are going to be paying roughly 50 percent more in the 1990 census for roughly the same type of operation that you had in 1980.

Mr. SAWYER. Is it your belief that those cost saving measures that have been discussed or implemented so far will not seriously compromise the quality of the product?

Mr. DODARO. I don't think so.

Mr. SAWYER. At this point, though, in just trying to put together a quick list of those that you mentioned, I come up with something in the neighborhood of $70 million out of what you have described as approximately a $400 million shortfall.

Can you discuss where additional reductions could be made without jeopardizing quality and the relationship of those to the scale of the problem that you foresee?

Mr. DODARO. Okay.

We have identified three potential areas where they can make additional savings. One is in the vacant-delete check.

This, basically, is after they have the nonresponse followup and enumerators report back that a housing unit is not occupied or not there, then they send another person back to double-check that information.

Now, the Bureau is planning to have a 100 percent double-check in each of those cases.

We think they could scale that back to a sample operation, rather than checking the entire universe of housing units, and they could possibly save some money.

Right now, they are estimating that it is going to cost about $50 million to have that operation done on an entire universe basis.

So we think part of that money, a lot of it, can be saved if they go to a sample basis.

They did use a sample basis in the 1970 census, and that seemed to work fairly well. So we think that scaling that back would not dramatically affect the data quality.

We also think that they could selectively use more incentive bonuses in some district offices, particularly in the hardest to enumerate areas. That would save some money. We estimate that more selective use could save about $15 million.

We also think that they could scrutinize their administrative costs in the district offices. In a number of areas, they will have several district offices. And in some of the activities, such as recruiting and processing of the information, and in outreach and publications, we think there are some opportunities for them to consolidate activities.

For example, within New York City alone, we estimate that there will be approximately 20 district offices. The question arises, does each of those offices need the total complement of operations.

We think that could save some money and would not unduly affect the data quality.

Mr. SAWYER. Let me just take a moment to pause and welcome the distinguished Ranking Minority Member, Congressman Tom Ridge, who has been able to join us at this point. As I mentioned earlier, he knew he was going to be late this morning.

I am glad that you could get here to be with us, Tom. It's a busy morning.

Mr. RIDGE. Yes, it is.

Mr. SAWYER. Congressman Chandler, do you have any questions?

Mr. CHANDLER. Mr. Dodaro, I appreciate your testimony and your answers to the Chairman's questions have largely answered mine.

I think that the biggest question in my mind is the difference of $400 million between your estimate of what the census will cost and what the Bureau has budgeted.

Can we get a decent census for $2.6 billion, or is it a highly compromised census, in your opinion, if we don't spend another $400 million, as you have suggested that we should?

Mr. DODARO. The biggest question that I have in my mind, Congressman, about the adequacy of the $2.6 billion has to do with the ability of the Bureau, using that estimate, to obtain the people that they need to execute the work.

I think that we could live, certainly, with that figure. But I'm not sure that we'd want to live with the result and the turmoil that it might cause, due to the turnover problems and getting the people.

I think the early census operations and the Bureau's ability to hire people in certain areas at $5.50 and $6.00 an hour just has not proven adequate.

I don't really know what impact those continued problems will have upon the data quality. But I do know that they will be operating short-handed in a number of areas and have significant turnover if they don't go to a more competitive wage structure. It's just not going to work.

Mr. CHANDLER. Mr. Chairman, I'm probably going to have to leave before my opportunity to question the representatives of the Bureau arrives, but I would like to ask Mr. Dodaro and also the Bureau to respond, perhaps, to this.

I don't know that this is a more dangerous Washington, D.C., in 1989 than it was in 1979, but, clearly, the perception is that it is more dangerous. I think that would be true of Detroit, Chicago, even, unfortunately, Seattle, though, thank heavens, not Bellevue, Washington. [General laughter.]

Is that a factor? Do you think we are going to have to begin to provide some protection for people who go out into high crime areas and gather census data? If so, is that cost reflected in your estimates or the Census Bureau estimates of what it will take to do the census?

Mr. DODARO. I think that is definitely a factor.

I'm going to ask Mr. Kaufman to elaborate on my answer a little bit, based upon the 1980 experience. But, traditionally, in the inner city areas, they have always had difficulty getting people to be able to do it.

Right now, the current estimate, or some of the early operations, call for them to pay 50 cents more in the urban areas than they do in the rest of the country. Personally, I don't think that's adequate. I think there's going to be a significant issue here associated with it, and I do not think that the current estimates reflect the difficulty they are going to have in those areas.

Jack, do you want to add to that?

Mr. KAUFMAN. I can recall in 1980, where in some of the areas in New York City, they were required to do team enumeration, where a couple of the enumerators would go together, at least approach-

ing a particular building. I foresee that as a real possibility in 1990 as well.

So that might slow up the operation. But it probably would be necessary, as I see it now, in New York and some of the other inner cities.

Mr. DODARO. Currently, Congressman, they are anticipating a 100 percent turnover rate in some of those cities during the operations. It is just going to be very difficult to do, particularly with the wage structure that they have now.

In many respects, census employment is not attractive in and of itself. It's temporary type work. There are no benefits associated with that work. In many areas you need a car, and that problem can be compounded in an area that is not very attractive and you are going door-to-door. In some cases the people there may be trying to hide the number of families, you know, multiple families in a unit.

It's not always a receptive household that they are going to during the follow-up phase—to basically get people to give information that they did not give voluntarily in sending in their questionnaire.

Mr. CHANDLER. Thank you.

Thank you, Mr. Chairman.

Mr. SAWYER. I see that we have a vote on the floor. We will stand in recess for ten minutes and will rejoin you for further questions. I understand Congressman Ridge has some questions.

[Recess.]

Mr. SAWYER. We will resume.

Congressman Ridge, do you have any questions?

Mr. RIDGE. Thank you, Mr. Chairman.

I do apologize to both you and our panelists for being late.

I would ask unanimous consent to submit a prepared statement at the beginning of the record.

Mr. SAWYER. Without objection.

Mr. RIDGE. Gentlemen, I appreciate not only your testimony today but the time you have taken to bring me and my staff up to speed on the mechanics of the census. I'm sure you have a lot of other distractions, other than trying to educate a Congressman. I appreciate your effort and hope you have concluded that I am educable. Maybe not, we'll see. Some constituents may disagree. I don't know. [General laughter.]

There are several concerns that I would like to share with you.

I note that we buy lists from commercial vendors. The Federal Government pays to assimilate these lists. I have often wondered how these lists differ from Postal Service lists. I also have wondered, with the magnificent Postal Service that we have in this country, why they are not used to provide that service. This could be done for free, or at least at less expense to the Federal Government.

Would you care to comment?

Have you looked at that?

Mr. DODARO. In the past, we have looked at that issue, and we wondered the same question ourselves. At our urging, special legislation was passed to allow the Bureau to test whether or not address lists compiled by the Post Office would suffice for their needs,

because there are some different needs in terms of them having to know the physical location of the address in order to tabulate for census purposes.

There was a test conducted back in 1984, but that had basically inconclusive results.

But we continue to believe that there are opportunities there to work with the Postal Service more, to see if we couldn't save some more money in the long run. The development of the address lists particularly, in the suburban and rural areas, is a very labor-intensive operation and requires a lot of time.

So I think that that area still offers opportunities that need to be explored.

Mr. RIDGE. Good.

You know, I've always felt that we have an existing network, a lot of qualified, talented and dedicated people, and that with enough notice and planning, they could be used to improve the accuracy and expand the census.

May I ask, from your view, is it too late to engage in that kind of activity now? I mean, if we were going to look at this, it should be for the census in the year 2000?

Mr. DODARO. Yes.

The Bureau has already purchased the commercial lists. They have already been out prelisting, developing the lists for the suburban and rural areas. It is basically too late now to do anything for the 1990 census.

It would have to start in the early 1990s. It's like a lot of the operations of the Bureau. Basically, if you are going to make any major changes, they need to be made almost in the first five years of the next decade in order to have it perfected and into operation before the subsequent census.

Mr. RIDGE. Well, Mr. Chairman, we'll take the censuses one at a time. I don't know if you plan on being here ten years from now. I'm not sure that I do. But maybe we can get things moving in that direction.

Let's focus, then, on the 1990 census.

I appreciate your testimony with regard to the recruitment and, perhaps even more importantly, the retention of enumerators. We want good, qualified men and women out there.

You have commented about the need to come up with different payscales, possibly, depending on the jurisdiction, regional pay scales. It is something that we have to explore and to which the Census Bureau must respond.

One other thought that I have had I would like to share with you and get your response to.

I have a pretty good relationship with some of the Federal retirees in my Congressional District—Treasury employees, Postal Service employees, and the like. The thought has occurred to me that since many of them have given a lifetime of service to the Federal Government, and since many of them are now in full or semi-retirement, they might be a good core group for qualified, stable enumerators.

One of the concerns of Federal retirees is that there would be an offset on their annuity. If they go out and generate income, then they lose the benefit of their pension.

The thought has occurred to me that, since they've spent a lifetime in public service, and if they are willing to help us in what is a Constitutionally mandated task, they should not suffer a deduction in their annuity. This is a very, very important task, not only because of reapportion the House of Representatives, but the demographic data generated by the census is plugged into many Federal benefit formulas. The need for a comprehensive, accurate census is critical.

We may be able to convince somebody in the House and the Senate that there ought to be a one-time exemption for Federal retirees who, receiving no other benefits, participate in this national Constitutionally-mandated undertaking.

Have you investigated that possibility?

Are these retirees a potentially good source of enumerators the Census Bureau would both be interested in and could retain?

Mr. DODARO. While we have not looked at it in any sort of depth, in terms of going out and talking to potential retirees, we do think that that is an excellent idea that needs to be explored.

We estimate that there are probably about 1.6 million Federal retirees, including retired postal workers, and we think they would be known in the local communities. They would be very familiar with the community. They would be the type of persons that would have access to follow up in the households.

We think it is a very good idea and we would support legislation to have the one-time waiver that you are talking about.

Mr. SAWYER. As you may know, we have a bill to accomplish precisely that which is in drafting at this point.

I share your view about the importance of it and would welcome joint participation in that.

Mr. RIDGE. Good. Good.

That is certainly something that I think we must examine and put it on a fast track. We're running out of time.

If we can't save some money using the existing postal lists, maybe we can use retired Federal employees. This is not to save money. That's not the point. We want to pay them whatever the rate is. The goal is the stability and competency of this pool of workers. In terms of knowing the district, a retired mailman would be a natural mesh for those six or eight weeks of work needed by the Census Bureau.

Let me take you into another step, if I can.

I'd like your assessment of the technological capabilities and advances made by the Census Bureau. I take a look at a $2.6 billion budget. What was it in the 1970 census?

Mr. DODARO. In 1970, it was about $222 million.

Mr. RIDGE. That certainly far exceeds the CPI.

So we're now looking at $2.6 billion and the era of the computer. I just want you to comment on the technological capability, in particular the software, and give us your assessment of it presently.

Mr. DODARO. I think the Bureau has made some strides in automating the census, and there are significant improvements over 1980. But, so far, they have not resulted in any significant reductions in the number of people that are needed to undertake the census.

One area, for example, is that they plan to have 20 percent of the questionnaires, once they are received, edited, by computers. But they are still going to manually edit 80 percent of the questionnaires across the country.

So we think, while they've made some improvements, there is an awful lot of room for additional improvements.

While it is too late to make any major changes now for 1990, in terms of automation, we would encourage the subcommittee and the Bureau to continue to explore options for the next census, because only through some radical changes in the introduction of new technology will we save any money in taking the next census.

We estimate the actual per household cost for 1990, based on the $2.6 billion estimate, is $18.28 in constant 1990 dollars. This compares to $6.85 in 1970.

So the cost has almost tripled, and that is exclusive of inflation, and adjusting for additional workload.

So we're talking about significant increases, and if that continues in the out-years, we are going to be talking about a significant investment to take the census.

Because about 70 percent of the costs of taking the census are personnel costs, you have to reduce the labor-intensiveness of the operations in order to effect any significant cost savings.

So automation is the real key.

Earlier, around the early to mid 1980s, the Bureau was experimenting with different technologies—optical mark readers, for example—and it really did not pan out because they were reluctant to make some adjustments in the size of the questionnaire.

But we think that after this next census, there has to be a really serious look at alternative ways of taking it on and what other methodologies and technologies are available to do that.

Mr. RIDGE. I have some questions about the computer generated maps and a whole range of other issues that I would like to submit to our witnesses in writing, Mr. Chairman.

Mr. SAWYER. Without objection.

[The followup questions of the subcommittee follow:]

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RESPONSES TO FOLLOW-UP QUESTIONS TO
THE MARCH 23, 1989 HEARING

Q1. The Bureau needed to raise the pay of field staff significantly in order to complete prelisting activities. Considering the experience with the prelist operation, are the Bureau's pay plans for field work in 1989 and 1990 reasonable? It not, has the Bureau prepared adequately, in terms of both monetary resources and operational needs, to implement alternative pay plans?

A1. Severe staffing shortages during prelist forced the Bureau to raise enumerator pay rates from $5.50 to $8.00 per hour--a 45 percent increase--in six east coast areas. Current Bureau plans call for enumerator pay rates of either $5.50 and $6.00 per hour in 1980 and 1990, depending on the location of the district office.

The prelist experience demonstrated that in high-cost areas with tight labor markets, the planned pay rates are not adequate to attract the needed employees. The Bureau is requesting $21 million in its fiscal year 1990 budget request for competitive pay. We believe, and Bureau field officials agree, that while helpful, this increase will not be sufficient to enable the Bureau to offer competitive pay rates.

The Bureau is reviewing its pay program and considering a system of geographic wages for 1990. We fully support the Bureau's effort and previously have testified that the Bureau needs to implement pay rates that are sensitive to local labor market conditions.

The Bureau, however, needs to expedite its decisions on a pay structure in time to address various operational issues. For example, the Bureau's recruiting officials told us that the development, printing, and distribution of recruitment materials is scheduled for this fall, and firm pay rates are needed by that time. In addition, the Bureau has had difficulties with payroll administration in the past and will therefore need to test its ability to administer any new system of geographic wages. Inaccurate and untimely payments can significantly contribute to staff turnover.

Q2. You expressed concern about the Bureau's failure to make decisions with regard to funding. In your opinion, what are the reasons for this lack of timely decision-making?

A2. The Bureau intended to develop a contingency plan for the 1990 census to identify program priorities in the event of budget shortfalls. However, it has not done so. We believe

that it did not develop the contingency plan for 1990 because of a combination of the following three factors: 1. The Bureau has not fully developed accurate cost estimates for decennial census operations, 2. It has an optimistic view that it can complete the census within budget, and 3. It believes that the identification of possible reductions will prematurely prompt program reductions. Instead the Bureau is relying on an automated management information system, which currently is not fully operational, to monitor the cost and progress of critical activities during the census.

Our concern is that the Bureau's failure to develop a contingency plan to identify actions needed in the event of budget shortfalls, will eliminate possible flexibility when deciding on operational cutbacks. Thus, the Bureau may be forced to make last minute decisions and curtail the more critical operations.

Q3. You stated that the turnover rate for prelist enumerators was twice as high as the Bureau had expected. Has the Bureau experienced similar problems in previous censuses? Aside from increasing pay, what might the Bureau do to attract applicants who will stay on the job for longer periods of time?



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A3. Turnover of temporary staff historically has been a major problem for the Bureau. During the 1980 decennial census cycle, enumerator turnover rates were as high as 74 percent in some offices. This pattern has continued during the 1990 decennial census cycle. Turnover during the dress rehearsal in St. Louis was 83 percent, and turnover during prelist was over 60 percent. For 1990, the Bureau is planning for enumerator turnover in urban areas to be 100 percent.

A number of factors contribute to turnover that are beyond the direct control of the Bureau. For example, decennial census employees are in temporary positions and do not earn fringe benefits. Nonetheless, the Bureau could take actions to minimize turnover. For example, it needs to address the problems of pay check delays and errors which have been persistent. One Bureau regional office estimated that 10 percent of prelist enumerator staff resigned due to these problems.

The Bureau also could better prepare enumerators for the personal stresses associated with dealing with a resistant public. During nonresponse follow-up, the major 1990 field operation, enumerators will visit housing units that did not mail back their questionnaires. For a variety of reasons, some of these households did not wish to be counted.

Bureau officials believe that frequent rejection and noncooperation by the public is a significant cause of enumerator turnover.

Finally, as we said in our prepared statement, the Bureau needs to undertake more intensive and comprehensive efforts to evaluate the causes of its recruitment and retention problems. The Bureau does not attempt to determine exactly why its temporary employees quit. Collecting this information would enable to Bureau to better design strategies to retain needed staff.

Q4. At the hearing, the Bureau testified that corrections to the TIGER maps made by enumerators during the census will not be incorporated in the central computer system until some unspecified time after the census. What impact might this failure to update the maps have on redistricting and other efforts in which these maps are used?

A4. The Bureau's decision not to update its automated geographic system as a result of changes noted by field canvassers should have no significant effect on redistricting. Population counts will be tabulated at the census block level. Thus, as long as states use these tabulations, geographic updates within the census block, will not affect redistricting.

However, the lack of updating could affect the local communities perception of the quality of the Bureau's counts and therefore their cooperation in the local review process. In addition, data users working with published census maps would not have the most accurate geographic information for areas below census block levels.

Considering the several hundred million dollars spent on the automated geographic support system, the Bureau's decision not to update the automated files should be carefully reviewed.

Mr. SAWYER. Our next witness is the Deputy Director of the Bureau of the Census, C. Louis Kincannon.

Good morning. Please proceed.

**STATEMENT OF C. LOUIS KINCANNON, DEPUTY DIRECTOR, BUREAU OF THE CENSUS, U.S. DEPARTMENT OF COMMERCE, ACCOMPANIED BY SUSAN MISKURA, CHIEF, DECENNIAL PLANNING DIVISION**

Mr. KINCANNON. Good morning.

I would like to introduce Susan Miskura, who is accompanying me. She is the Chief of the Decennial Planning Division and will assist me in answering more detailed questions that the committee may have.

With your permission, I have a brief summary oral statement, which I would like to read, and I will submit my full statement for the record.

Mr. SAWYER. Go ahead.

Mr. KINCANNON. Mr. Chairman, I will report to you today on the status of plans for the 1990 census and on the specific issues you raised in your letter of invitation.

Census Day for the 1990 census, the Bicentennial Census of the United States, is April 1, 1990. It is 374 days from today.

Exactly one year from today, we will mail out the census questionnaires to most of the nation's housing units.

The census is a massive and complex undertaking that will involve enumeration and collection of characteristics for about 250 million people and 106 million housing units in the United States, and for an additional 3.6 million people in 1.2 million housing units in Puerto Rico and the outlying areas.

The census is also one of the most important activities of the Federal Government. Political representation and money are allocated based on census results and the data are used for planning at every level of government and in the private sector.

By law, we must submit state population counts for apportionment purposes to the President by December 31, 1990, and counts for use in drawing legislative district lines to the states by April 1, 1991.

I will discuss three topics today: first, the census budget and pay for temporary census workers; second, the dress rehearsal census; and, third, the progress of major preparatory operations, namely address list compilation, questionnaire printing, and space acquisition.

First is the census budget and pay for temporary census workers.

We estimate that the 1990 census will cost about $2.6 billion. We believe that this total will be sufficient to take a good census. Factors outside our control, such as lower than expected mail return rate or lower than expected productivity, could increase the cost. But we do not expect this to happen.

If one of these occurs, we will inform the subcommittee promptly.

We will have to make a decision rather quickly if that occurs, based on the precise nature, magnitude, and timing of the problem and other factors at the time.

We now have in place a tool that will help us do this, the Automated Management Information System, which is new for 1990. The Automated MIS will give us up to date cost and progress information, so that we can monitor critical census activities on a daily or weekly basis.

We have in place now a decision-making process that will lead to a resolution of such problems. This process involves working meetings of key headquarters staff involved in planning and implementing the census, executive staff review at the Census Bureau, and departmental and budgetary review as well, depending on the implications of those decisions.

This process will be guided by the principles of preserving census timing, preserving census quality, and preserving census accuracy.

As I mentioned earlier, we have mandatory deadlines that we must meet for the release of apportionment and redistricting data. We also have as major goals in the census to maintain a high rate of overall coverage, improve the accuracy of small area data, and reduce the differential under-count for population groups and geographic areas.

These deadlines and goals will guide us in making any necessary decisions to deal with problems in 1990.

Now I will turn to the issue of pay for temporary census workers.

We will need to hire about 480,000 persons during the period from October of 1989 to September of 1990, with about 315,000 actually working at the peak of operations in April through June of 1990.

Hiring this army of workers will be a challenge, as it has been in recent censuses.

During our 1980 pre-list operation, which is an address list compilation operation, we learned that our base pay rates of $5.50 to $6.00 an hour were not competitive in some areas.

Pre-list was our first, large-scale national operation and required some 35,000 workers. Toward the end of pre-list, we found we had to increase the pay rate to $8 an hour in selected areas where we were having difficulty hiring.

At the time we instituted the pay increase, we developed a test to evaluate the effectiveness of the pay increase relative to the original pay rate. We are continuing to analyze its effect on productivity and census quality.

At the same time, we are developing a scheme for several different rates of pay for district offices, based on a range of factors, including unemployment rates, prevailing wage rates, and so on.

When both of these analyses are complete, we will have some understanding of the effects and costs of geographically variable pay rates and whether we can use existing funds or need to explore other sources.

A separate issue is supplemental pay for the temporary field staff. The purpose of supplemental pay is to increase enumerator productivity, reduce turnover, and help us meet our goal of a quality census.

Supplemental payments are based on the amount of quality work completed within a designated time period. Previous tests and field experiences lead us to believe that they are a valuable tool. There

are no explicit costs involved. It involves a redistribution of basic pay.

We plan to use a supplemental pay system in 1990, but we may modify our plan based on the analysis of the 1988 dress rehearsal experience, which is not entirely completed yet.

Second, I would like to talk about the dress rehearsal itself.

Last year, we completed the field work for our 1988 dress rehearsal census. It was a very successful dress rehearsal, as we accomplished exactly what we set out to do. More than 500,000 housing units and more than 1 million people were included in the dress rehearsal sites.

The dress rehearsal proceeded smoothly. No major problems occurred. We were able to accomplish our main objective, which was to implement the major programs, procedures, work flows, systems, and methods that we will use to conduct the 1990 census.

We were also able to identify necessary refinements for a successful 1990 census. This is why we conduct tests and dress rehearsals.

We have identified several areas where improvements can be made, and we plan to make them.

In my written testimony, I discuss some of the achievements of the dress rehearsal and some of the improvements we have made as a result of it.

Third, I'd like to talk about major preparatory activities.

We have begun major preparatory activities, and I will provide updates on three of these, namely, address list compilation, the census questionnaires, and space for census operations.

First, address list compilation.

One of the major preparatory activities for the 1990 census is the compilation of an address list that we would use to control the delivery and return of questionnaires in 1990. We plan to enumerate 94 percent of the households by mail-back procedures.

With these procedures, we compile an address list in advance of the census, mail or deliver a questionnaire to each address, and follow up on those addresses for which questionnaires are not returned by mail.

In this way we can complete most of the census by mail, and concentrate our resources on the followup cases.

The success of these procedures depends, in large part, on the compilation of an accurate address list before census day.

We successfully completed several activities in 1988 related to compiling the address list, and we will conduct other operations this year. These are proceeding on schedule. Details of these operations are in my written testimony.

We expect that, when we are through with all our address compilation operations, the list will contain an address for virtually every housing unit and group facility in the areas that we will ask questionnaires be returned by mail.

Now let me speak about census questionnaires.

As in recent censuses, we will have two primary questionnaires—a short form and a long form.

The short form will contain the basic population and housing subjects asked of all persons in housing units.

The long form will contain the same basic subjects plus additional population and housing items asked only for a sample of persons in housing units.

Questionnaire printing is one of our most important activities for the census. We cannot conduct the census, obviously, without questionnaires.

Several major contracts for printing have already been awarded, and work continues on other procurements.

Space for census operations: in all, we will require about 6 million square feet of space for temporary offices to manage the 1990 census data collection and processing. These will include 13 regional census centers, 493 district offices, of which 484 are in the United States and nine are in Puerto Rico, and nine processing offices.

The regional census centers manage the district offices and, together, they are responsible for collecting the census data.

The processing offices prepare the census questionnaires and convert them to computer readable format, so that we can produce data products.

The 13 regional census centers are open now. The district offices will open on a phased basis. About a quarter have opened early to conduct address list updating operations, and the rest will open later this year.

Four of the processing offices are open now, and the other three are scheduled to open this fall.

Mr. Chairman, in closing, let me summarize where we stand as we approach the 1990 census.

We have completed a very successful dress rehearsal census, have learned from that experience, and have refined census plans accordingly. And we have successfully completed some major census preparatory activities and expect others to continue, as planned, to completion.

We believe we have requested sufficient funding to take a good census, including implementing many improvements over the 1980 census.

I will take just a couple of minutes to review some of those improvements.

The biggest improvements since 1980 have been in the use of automation.

In 1980, many census activities, including map production, maintenance of the address list, check-in and review of questionnaires, and tracking of costs and progress, were largely clerical operations. They were, therefore, slow, cumbersome, and prone to error.

For 1990, through a cooperative venture with the U.S. Geological Survey, the entire map base for the country has been digitized into a computer data base that can generate maps at varying scales and varying levels of detail. This system, which we call TIGER, is a major breakthrough for census operations and promises to be a valuable tool for other agencies and the private sector, and will be usable in future censuses.

New automated systems will also be used to monitor the status of every questionnaire individually. The automated address control file will contain the complete housing unit inventory necessary to insure the inclusion of every household in the census.

Each questionnaire will have a unique bar code that will make check-in and monitoring of the questionnaires easier and more reliable.

This increased automation will improve the management and control of field and processing operations.

The Census Bureau would use an Automated Management Information System to track the cost and progress of each operation. This will significantly increase the ability to implement and manage this large program, and to improve the accuracy, consistency, problem solving and the effective use of the sources.

Other program improvements include earlier planning and testing; improved operations to complete an accurate mailing list; improved methods of questionnaire delivery and efforts to increase mail response; a review both before and after the census of preliminary counts by over 39,000 governmental units; and greater and earlier outreach and publicity for the census.

We have first-rate publicity and outreach plans to involve the American people. Our efforts will include mass media advertising and working with national and community organizations, religious organizations, schools, private companies, and state and local governments.

For the first time, we have minority advertising agencies designing ads targeted to minority audiences. Especially important are our efforts to cooperate closely with state and local officials to make the census a success in their areas. We are asking them to help us in several key ways, including promoting the census and building good public cooperation, and identifying good candidates for temporary census jobs.

We are doing this through one-on-one contact with mayors of key cities and through some 20 regional elected officials' meetings, among other efforts.

The 1990 census is more than just a Federal activity. It is a national ceremony, and its success depends on all of us working and pulling together, an effort that must intensify as we approach April 1, 1990.

This is an exciting time as we count down to Census Day. We have made substantial, even historic, changes in the way we are conducting the census.

Mr. Chairman, I welcome you as the new Chair of this committee and the new Members, and I look forward to a very good working relationship with the committee as we approach this critical period.

This concludes my remarks.

I would be very pleased to answer your questions.

[The statement of Mr. Kincannon follows:]

STATEMENT OF

C. LOUIS KINCANNON
DEPUTY DIRECTOR, BUREAU OF THE CENSUS

## INTRODUCTION

Mr. Chairman, I will report to you today on the status of plans for the 1990 census and on the specific issues you raised in your letter of invitation.

Census Day for the 1990 census--the Bicentennial Census--is April 1, 1990, 374 days from now. Exactly a year from today, we will mail out the census questionnaires to most of the Nation's housing units.

The census is a massive and complex undertaking that will involve the enumeration and collection of characteristics for about 250 million people and 106 million housing units in the United States, and for an additional 3.6 million people and 1.2 million housing units in Puerto Rico and the Outlying Areas. Our goal is to count every resident, regardless of where they live: whether in a single-family home, an apartment, a condominium, a group quarters--such as a college dormitory or nursing home--or in a shelter for homeless persons or a pre-identified street location where homeless persons sleep at night. We have had to devise procedures to cover each of these living arrangements, as well as to assure good census coverage in different parts of the country--urban areas, suburbs and small towns, rural areas, sparsely populated and remote areas, and so on.

The census is also one of the most important activities of the Federal Government. Political representation and money are allocated based on census

results and the data are used for planning at every level of government and in the private sector. By law, we must submit state population counts for apportionment purposes to the President by December 31, 1990 and counts for use in drawing legislative district lines to the states by April 1, 1991.

I will discuss three topics today--(1) the census budget and pay for temporary census workers, (2) the dress rehearsal census, and (3) the progress of major preparatory operations, namely address list compilation, questionnaire printing, and space acquisition.

## CENSUS BUDGET AND PAY FOR TEMPORARY CENSUS WORKERS

One--the census budget and pay for temporary census workers.

We estimate that the 1990 census will cost about $2.6 billion dollars. We believe that this total will be sufficient to take a good census. We are constantly examining and refining the census design so that realistically it can be carried out within currently approved budget levels. While staying within our budget targets, we will strive to preserve our objective of maintaining a high level of quality.

Factors outside our control, such as lower-than-expected mail-return rates or productivity, could increase the costs, but we do not expect that to happen. If one of these occurs, we will inform this Subcommittee promptly. We will have to make a decision rather quickly based on the precise nature, magnitude, and timing of the problem and other factors at the time. We now have in place a tool that will help us do this--the automated management information system

(MIS)--new for 1990. The automated MIS will give us up-to-date cost and progress information so that we can monitor critical census activities on a daily or weekly basis. We have in place now, a decision-making process that will lead to a resolution of problems. This process involves working meetings of key headquarters staff involved in planning and implementing the census, executive staff review at the Census Bureau, and departmental and budgetary review. This process will be guided by the principle of preserving census timing, quality, and accuracy. As I mentioned earlier, we have mandatory deadlines we must meet for the release of apportionment and redistricting data. We also have as major goals in the census to maintain a high rate of overall coverage, improve the accuracy of small area data, and reduce the undercount differential for population groups and geographic areas. These deadlines and goals will guide us in making any necessary decisions to deal with problems in 1990.

Now, I will turn to the issue of pay for temporary census workers. We will need to hire 480,000 persons during the period October 1989 to September 1990, with about 315,000 actually working at the peak of operations (April-June, 1990). This includes staff in our regional census centers, district offices, and processing centers, which I will discuss later. Hiring this army of workers will be a challenge, as it has been in recent censuses.

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Over the last 4 years, all through our testing cycle, we have been addressing this vital issue of how to recruit, pay, train, and manage our workers. We have implemented innovations in our tests and are confident these will help us recruit and retain good workers, as well as make the census better.

Still, during our 1988 prelist, an address-list compilation operation, we learned that our base pay rates of $5.50-$6.00 an hour were not competitive in some areas. Prelist was our first large-scale, national census operation and required some 35,000 workers.

Toward the end of prelist, we found we had to increase the pay rate to $8.00 an hour in selected areas where we were having difficulty hiring. At the time we instituted the pay increase, we developed a test to evaluate the effectiveness of the pay increase relative to the original pay rates. We are continuing to analyze its effect on productivity and census quality. At the same time, we are developing a scheme for setting several different rates for district offices based on a range of factors including unemployment rates, prevailing wage rates, and so on. When both of these analyses are complete, we will have some understanding of the effects and cost of geographically variable pay rates and whether we can use existing funds or need to explore other sources.

A separate issue is supplemental pay for the temporary field staff. The purpose of supplemental pay is to increase enumerator productivity, reduce turnover, and help us meet our goal of a quality census. Supplemental payments are based on the amount of quality work completed within a designated

time period. Previous tests and field experiences lead us to believe they are a valuable tool. There are no explicit costs involved; it involves a redistribution of basic pay. We plan to use supplemental pay in 1990, but we may modify our plan based on the analysis of the 1988 dress rehearsal experience, which is not completed yet.

## DRESS REHEARSAL CENSUS

Two--the dress rehearsal census.

Last year we completed the field work for our 1988 dress rehearsal census. It was a very successful dress rehearsal, as we accomplished exactly what we set out to do. More than 500,000 housing units and more than 1 million people were included in the dress rehearsal sites.

We conducted the dress rehearsal in three sites representative of the kinds of enumeration conditions in which we will conduct the 1990 census. St. Louis, Missouri, is a large city with a high concentration of minorities, low-income persons, and multiunit housing. The fourteen counties encompassed in the east central Missouri test site contain one medium-size city (Columbia), a number of smaller cities and towns, rural areas, colleges, a major military base, and resort areas. The eight counties included in the eastern Washington test site contain some small cities and towns, but are composed largely of remote, sparsely populated areas. We also included the Colville and Spokane American Indian reservations which border the eight counties.

The dress rehearsal proceeded smoothly; no major problems occurred. We were able to accomplish our main objective, which was to implement the major programs, procedures, workflows, systems and methods that we will use to conduct the 1990 census. We are extremely pleased with having carried out the full range of field data collection activities in reasonable time frames and within budget using new computer systems.

Another accomplishment was the successful implementation of 1990 automated systems, workflows and equipment. For example, we implemented the 1990 office configuration based on different questionnaire workflows for 3 major types of district offices. We also implemented the system for updating/maintaining the address control file, a system that involves the regular transfer of information between the processing offices, the district offices, and headquarters.

In addition, we implemented an extensive outreach and publicity campaign, including an advertising campaign developed under the auspices of the Advertising Council.

By implementing these new and other previously tested procedures and programs in census-like conditions, the dress rehearsal afforded us the opportunity to identify necessary refinements for a successful 1990 census; this is why we conduct tests and dress rehearsals.

We have identified several areas where improvements can be made. Based on dress rehearsal results and other data, we made a decision to use a new

enumeration technique for about 11 million rural addresses in 1990. (These addresses will be listed in the second phase of prelist.) Census enumerators, rather than the postal service, will deliver the questionnaires for these areas because we cannot successfully list addresses that the U.S. Postal Service can use for mail delivery. In addition, the enumerators will update the address list at the time they deliver questionnaires as a check on housing unit coverage and on the correctness of the addresses.

We refined the procedures for enumerating components of the "homeless" population. We have modified the quality control operation for the advance post office check. Several refinements and modifications will be made to the assignment control operation in the district offices--this operation is key to the flow of work between various field, clerical, and automation operations in the offices. We have identified various refinements and changes needed in software, hardware configurations, and telecommunications for the district and processing offices.

## MAJOR PREPARATORY ACTIVITIES

We have begun major preparatory activities and I will provide updates on three of these--(1) address list compilation, (2) the census questionnaires, and (3) space for census operations.

### Address List Compilation

First--address list compilation.

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One of the major preparatory activities for the 1990 census is the compilation of an address list that we will use to control the delivery and return of questionnaires in 1990. We plan to enumerate 94 percent of the housing units by mail-back procedures. With these procedures, we compile an address list in advance of the census, mail or deliver a questionnaire to each address, and follow up on those addresses for which questionnaires are not returned by mail. This way, we can complete most of the census by mail and concentrate our resources on the follow-up cases. The success of these procedures depends in large part on the compilation of an accurate address list before Census Day.

For the more urban areas of the country, we purchased 56 million addresses from commercial vendors under contracts awarded in February 1988. We have assigned these addresses to the correct geographic location by computer and by clerical research when the computer could not make the assignment. In July 1988, we began the first phase of our "prelist" operation, and we completed it in January 1989. In this operation, enumerators systematically canvassed and listed addresses for the more suburban, small-town, and rural parts of the country, where lists either do not exist or cannot be assigned geographic codes by computer. The "prelist" will be conducted in two phases. In the first phase, we listed about 30 million addresses. The second phase, which we will conduct beginning this June, will list an estimated additional 11 million addresses.

Our experience shows that updates by census enumerators and postal workers are required to produce a complete and accurate address mailing

list for the census. Thus, we have contracted with the U.S. Postal Service (USPS) to conduct several checks of the lists for completeness and accuracy. In addition, our staff will conduct checks. The first of the USPS checks--the advance post office check--was completed last fall for the addresses we purchased from commercial vendors. Mail carriers informed us of any addresses not on our list to which they deliver mail and added the addresses to our list. The carriers also corrected erroneous addresses and informed us if we gave them an address that did not exist. The addresses we listed in "preist" are undergoing the same type of advance post office check now--one phase has been completed and another will be conducted in April.

Another check of the address list is the "precanvass" operation, an updating of the addresses in urban areas that we will conduct in May and June. Our enumerators will systematically canvass their assigned areas to look for addresses not on our list and to make corrections to the list. We expect that, when we are through with all our address-compilation operations, the list will contain an address for virtually every housing unit and group facility in the areas where we will ask that questionnaires be returned by mail.

Mail carriers will deliver unaddressed questionnaires to housing units not in mail-back areas--primarily the more remote, sparsely populated areas of the country containing about 6 percent of all housing units. Here we will ask householders to complete their questionnaires and hold them until an enumerator visits to pick them up. There is no precensus address list for these areas; the enumerator lists each address during his or her visit.

QUESTIONNAIRE

Second--the census questionnaires.

As in recent censuses, we will have two primary questionnaires--a short form and a long form. As in recent censuses, they are designed to be machine-readable. The short form will contain the basic population and housing subjects asked of all persons and housing units. The long form will contain these same basic subjects plus additional population and housing items asked only for a sample of persons and housing units. Basic population subjects include name, household relationship, sex, age, race, marital status, and Hispanic origin.

As I reported to you in a letter of February 27, 1989, we revised the 1990 census race question to include prelisted response categories for nine Asian or Pacific Islander (API) population groups. The Office of Management and Budget approved this change. These will be the same nine groups included in the 1980 census race question. New for 1990, we have added a category with a write-in box for those Asian and Pacific Islander groups not listed individually to report their specific groups. We will assign codes to these entries, as well as to the entries in the write-in box for American Indian tribes.

Questionnaire printing is one of our most important activities for the census. We cannot conduct the census without questionnaires.

The Government Printing Office (GPO) has awarded a contract for producing approximately 86 million short-form questionnaire mailing packages at a cost of $18 million. This award represents the largest single product award ever made by GPO for printing and associated services. Each questionnaire mailing package will include outgoing and return envelopes, an addressed questionnaire, instructions for completing the questionnaire, and a motivational insert. Long-form questionnaire mailing packages will also be produced.

The Government Printing Office (GPO) has awarded two additional contracts for the production of enumerator-administered short- and long-form questionnaires. The enumerator-administered questionnaires will yield data identical to those from the regular mail-out questionnaires, but the questions are reworded to ease their reading and understandability during an interview. This is the first census that has had this type of questionnaire, which could contribute to reducing enumerator-related errors. Work continues on other procurements for public-use forms and on preparing camera copies and film negatives for the printing contractors.

Space for Census Operations

Third--space for census operations.

In all, we will require 6 million square feet of space for temporary offices to manage 1990 census data collection and processing. These will include 13 regional census centers, 493 district offices (484 in the United States and

9 in Puerto Rico) that the regional census centers will manage, and 7 processing offices. The regional census centers and district offices are responsible for collecting the data. The processing offices prepare the census questionnaires and convert them to computer-readable format so that we can produce data products.

The regional census centers are located in close proximity to our permanent regional offices, plus San Francisco. All 13 offices are occupied now.

The district offices will open on a phased basis. For example, 108 of the offices are now leased and another one will be by the end of this month. These offices are opening early to conduct address list updating operations, such as the precanvass operation I mentioned earlier.

Four of the processing offices are open now--those in Kansas City, Missouri; Baltimore, Maryland; Jacksonville, Florida; and San Diego, California. We plan to open the other three later in 1989 in Albany, New York; Austin, Texas; and Jeffersonville, Indiana.

## CLOSING

Mr. Chairman, in closing, let me summarize where we stand as we approach the 1990 census: We believe we have requested sufficient funding to take a good census, including implementing many improvements over the 1980 census. We have completed a very successful dress rehearsal census, have learned from that experience, and have refined census plans accordingly. And we have

successfully completed some major census preparatory activities and expect others to continue as planned to completion.

I will mention a couple of other points that I did not mention earlier in my testimony:

With regard to automation:

In 1987, we undertook and successfully completed the largest computer procurement in our history. In all, we will acquire 550 minicomputers (350 leased and 200 purchased), most of these for the decennial census (520) and the rest for our economic and agriculture censuses and current surveys. With this procurement, we have taken a giant step forward to make the 1990 census the most automated ever. The increased automation will reduce the amount of labor-intensive, error-prone clerical work involved in the 1980 census; allow us to begin questionnaire processing earlier and, thus, give us an opportunity to release data products in a timelier fashion than for 1980; and give us more control over the whole census process.

One of the most far-reaching activities has been the development of the TIGER system. The TIGER system integrates all of our geographic support activities into one automated data base. This solves one of our major problems with the 1980 census--the creation of geographic products in independent operations that led to errors and inconsistencies in the procedure. In addition to being a vital component of a successful 1990 census, it will benefit all our censuses and surveys and provide valuable services to data users. We tested this system successfully in the dress rehearsal, have used it to produce maps

from the prelist operation and for local government officials to verify and update their area boundaries, and used it to assign the purchased addresses to their correct geographic location. We are now using TIGER to produce maps for the precanvass operation and the first phase of local official review of census counts.

With regard to census promotion:
We have first-rate publicity and outreach plans to involve the American people. Our efforts will include mass-media advertising and working with national and community organizations, religious organizations, schools, private companies, and state and local governments. For the first time, we have minority advertising agencies designing ads targeted to minority audiences.

Especially important are our efforts to cooperate closely with state and local officials to make the census a success in their areas. We are asking them to help us in several key ways, including promoting the census and building public cooperation and identifying good candidates for temporary census jobs. We're doing this through one-on-one contacts with mayors of key cities, some 20 regional elected officials meetings, the mass mailing of a handbook on how to promote the census locally to all 39,000 governmental jurisdictions, special efforts with American Indian reservations and Alaska Native villages, improvements to our program for local official review of preliminary census counts, and ongoing, close working relationships with the major public interest groups that serve state, city, and county officials. The 1990 census is more than just a Federal activity. It is a national ceremony and its success depends on all of us working and pulling together--an effort that must intensify as we count down to April 1, 1990.

Mr. SAWYER. Thank you very much, Mr. Kincannon.

I want to echo your comments. I look forward to that relationship. If there is anything that really summarizes the testimony that you offered this morning and the work that has been done over the last decade, it is that the census is, in fact, not just a Federal undertaking. It really is a national project, important for years, if not decades, beyond the execution of the task over the next year.

With that in mind, you seem to be confident that you will be able to conduct the census within the current cost estimate of the $2.6 billion. You said in both your spoken and written testimony that you think you have requested sufficient funding within that estimate.

What is the rate of pay for enumerators that this cost estimate assumes?

Mr. KINCANNON. That rate of pay is between $5.50 and $6, for most offices, although for some offices, pending approval of the President's request for Fiscal Year 1990, we will pay somewhat more than that.

Mr. SAWYER. Do you have any sense of how much those additional compensation rates will cost and where those dollars will come from?

Mr. KINCANNON. The additional money that we have asked for in 1990 is $21 million.

Let me clarify and make sure that we are talking about the same thing.

Mr. Dodaro discussed the need for even higher pay rates, based on our experience in the national pre-list activity in 1988. That is not included in the proposal for 1990.

We are continuing a review of our test of these higher pay rates in 1988. We are also doing research related to labor market conditions in different areas, and we expect to reach a conclusion about the effectiveness of that, how much it would cost if we implement it, and then we will examine whether we have flexibility in our resources to handle that, or need to look to other sources of funding.

Mr. SAWYER. Well, I assume that looking to other resources in funding might well include some of us on this side of the table?

Mr. KINCANNON. Yes, sir.

I expect that we would want to visit the Congress if that proved to be the case.

Mr. SAWYER. It's clear, though, in your own testimony, that in the pre-test, in the dress rehearsal, you had to raise the pay rate to $8 in selected areas. That is a substantial increment.

You talked about a decision-making process. When do you reach the trigger point on that kind of decision-making? When can we look forward to hearing from you on your sense of the adequacy of funds?

Mr. KINCANNON. We expect to reach a conclusion about the test and our evaluation of it this spring.

Mr. SAWYER. If you didn't come to us, are there alternative activities within the census that you would have to scale back in order to stay within the scope of the anticipated budget?

Mr. KINCANNON. Well, of course, we would look at that first. We would look at the cost benefit of increasing pay versus other activities.

We also will know more at that time about other costs in the census. For example, we have let and are continuing to let through the Government Printing Office contracts for printing. Early indications are that cost estimates are coming in a little lower than we had expected, and, as we open up the district offices, we will know whether we have budgeted enough, too much, or not enough, and we will be able to evaluate those things and determine whether we have the flexibility to absorb any needed increases in pay, or whether we need to come and ask for help.

Mr. SAWYER. Is it fair to assume that the anticipated level of quality and accuracy the $2.6 billion was based on would not be compromised in making any of the adaptations or design changes or program reductions that you are considering as alternatives right now?

Mr. KINCANNON. We certainly do not contemplate any major change in quality levels. We would have to examine that at the margin. The particular mix of activities or possible reductions would have to include that as a matter of evaluation, and we'd certainly want to discuss that widely.

Mr. SAWYER. Thank you.

Mr. Ridge.

Mr. RIDGE. Welcome. It is certainly nice to have the opportunity to chat with you about these things.

Some of my colleagues on this committee know that I have interests, in addition to the technical details, on the comprehensive nature of the census.

In the first couple of questions, I'd like to talk about specifically who is to be enumerated.

Will servicemen overseas be enumerated for apportionment purposes? If so, what process will be used?

Mr. KINCANNON. We do not now plan to enumerate Americans who are residing overseas, servicemen or others, for purposes of apportionment.

Mr. RIDGE. Will illegal aliens or undocumented aliens be enumerated in the 1990 census for reapportionment purposes?

Mr. KINCANNON. Our current plans are to enumerate everyone usually resident in the United States, regardless of their legal status, for purposes of apportionment.

Mr. RIDGE. Will there be any effort, either through post-enumeration studies or similar adjustments, to account for what is perceived by many people to be a minority under-count in the larger, urban areas of this country?

Mr. KINCANNON. We plan to conduct a post-enumeration survey and also carry out a process of demographic analysis to evaluate the extent of coverage in the census, whether there has been over-coverage or under-coverage, and the characteristics of groups that may be either counted twice or missed.

Mr. RIDGE. Thank you.

Would you be kind enough at your convenience to give us a breakdown, an aggregate cost, for the commercial vendor expenses, i.e., list acquisition, development, and the like, as well as the aggre-

gate costs—and any breakdown that is available—of what the Federal Government will pay the Post Office for checking the procedure, the pre-list, and confirmation of accuracy? Can you give that to us, if not today, then sometime in the future?

Mr. KINCANNON. Of course, sir.

Mr. RIDGE. Thank you.

Mr. KINCANNON. The acquisition costs for the commercial lists were quite low, actually, about $30,000, although there were other costs associated with our handling of those lists. Costs that we were paying the Post Office are much higher than that. But we will provide for the record all of that information.

Mr. RIDGE. I appreciate that. Thank you very much.

I told my colleague and friend from Ohio that in doing our 1988 pre-list and address list compilation, we learned that our base pay rates of $5.50 and $6 an hour were not competitive in some areas.

I concluded from predictions in the minimum wage debate, that elevating pay to $4.50 an hour by the year 1992, will not help in areas where you don't think you can get qualified part-time people for $6 an hour. That is just rhetorical. You don't have to respond.

Mr. KINCANNON. Thank you, sir.

Mr. RIDGE. I'm not sure that I'll quote you or not in that debate, but I am sorely tempted to do that.

The need to manually check 80 percent of Census questionnaires in light of the automated system that you have acquired and have adapted to your purposes seems rather high, given the expense. You bought 200 new computers and are leasing several hundred others.

Is there a particular reason that, in spite of this automation, there still remains a high percentage of manual review of these documents?

Mr. KINCANNON. There really is far less manual review of the documents than in 1980. It's not just 20 percent. I don't know how to quantify that. My colleague might be able to as she thinks about it for just a moment here.

But 80 percent of the questionnaires will have some clerical review. But 100 percent of the questionnaires will have automated edit and automated coding of entries.

We decided to have the mail returns for a substantial portion of questionnaires go to district offices, rather than to the processing offices. But for the district offices in highly urbanized areas, where we have our greatest difficulty, we wish to insure that those district offices be relieved of that obligation entirely so that they could concentrate on the task of collecting questionnaires from households that did not return them.

Now, Susan, I don't know whether I gave you enough time to get some notion about the overall reduction in clerical edit and review from 1980.

Ms. MISKURA. Well, it is true that 80 percent of the questionnaires, the 80 percent that will be returned directly to district offices, will undergo an initial clerical review that will be manual, similar, although we think improved in many respects to what happened in 1980.

The basic reason for doing 80 percent in the district offices and only 20 percent in processing offices was a determination that was

made several years ago, when we were looking at what tasks we were going to assign to our decentralized processing offices, how many of those offices we were going to have, and what tasks they were going to perform.

The major considerations at that time were how many people we would have to hire in the concentrated areas where we would have processing offices and the ability to manage a number much larger than the seven that we have now.

So we would have had to have had many more processing offices and/or much larger processing offices, risking staffing problems in those offices if we were to do a computer review of that 80 percent, additional 80 percent, of the questionnaires.

We do have an opportunity, once that 80 percent comes to the processing office, to do a second automated edit, and we do do that check for large errors in large areas.

Mr. RIDGE. I regret that this next question may be out of line because I have not seen either the short or the long form, but I remember taking standardized tests in school. There are all kinds of standardized tests out there, which can be automated to relieve the pressures the Bureau has with their labor-intensive approach.

Are you satisfied that the census forms have been adapted to take maximum advantage of existing technology?

Mr. KINCANNON. I think they are.

In terms of forms that are readily converted to computer readable form, that operation is extremely efficient and highly perfected. It works very well. So I am satisfied with that.

We might change methods. Mr. Dodaro spoke of a comparison with optical mark reading, as opposed to the optical scanning device that we use now. We might use another device or a different device in the year 2000. But I don't think that there basically is a lot of room for improvement in speed of doing that.

Using a scanning device of any type at this point involves some compromises in design. As you no doubt recall from those standardized tests, they, in some cases, look more like they were designed for a machine than for a human being to fill out, and that is still true.

Mr. RIDGE. The only thing I answered phoenetically was my name, address, and age. The rest I filled in with either a dot or a line.

Mr. KINCANNON. That's right.

I think we would like to be able to design a form where we were freer to adapt to what we believe is "user friendly," as the phrase would go now.

We did a study in the 1970s of a user friendly form and a machine friendly form, and there was not a significant difference in that test. It was somewhat counter-intuitive, but we did examine it.

Mr. RIDGE. I appreciate that.

I have one final question, actually two, if I might.

In the advertising campaign, you are working with the Advertising Council. I think you are to be commended for broadening the base of potential advertisers and including those with specific ethnic orientations. I think that is very, very important.

Will there be some people paid for this service, or is it an all volunteer effort?

Mr. KINCANNON. No, sir. It is an all volunteer effort.

Mr. RIDGE. That's commendable.

Mr. KINCANNON. We pay the production costs, but not the creative costs, and, of course, we do not pay for placement of advertising.

Mr. RIDGE. That is commendable and I congratulate you for that.

Then, finally, let me speak to the question of recruitment and retention.

We anticipate the need to hire 400,000-plus employees for that period, but with turnover, it may be well in excess of a million people who get a paycheck. So stability in the work force would enhance the accuracy and reduce management problems.

Do you have any thoughts you would like to share with the subcommittee on our suggestion that we use Federal retirees and give them some kind of accommodation on their pension benefits?

Have you had any discussions with those groups or organizations to feel them out one way or the other?

Mr. KINCANNON. I have not personally.

I don't think the Census Bureau has any objections to that. As a matter of fact, it seems like a good idea.

We had discussed it internally and, examining the times that Congress has allowed an exemption of that sort, they are very few and very strict. So we did not suggest that.

But I am certainly not speaking with an administration position.

Mr. RIDGE. I understand.

Mr. KINCANNON. But we have no objection to that.

Mr. RIDGE. Fine.

This is something Congressman Sawyer and I feel strongly about and which we will pursue.

I appreciate your testimony and look forward to the responses of the few questions that I did ask you, where I need something specific in return.

Oh, in addition, when you provide that, you might send up a copy of the long form and the short form for me.

Mr. KINCANNON. Yes, sir. We certainly will do that.

Mr. RIDGE. Thank you.

Thank you, Mr. Chairman.

Mr. SAWYER. Just a couple of follow-up questions.

I heard you say that you accomplished exactly what you sought to do in the dress rehearsal in 1988. By that I assume that exactly what you sought to do included finding out where you might be less prepared than you'd hoped to be so that you can timely make corrections.

Mr. KINCANNON. That's correct, sir.

Mr. SAWYER. It's not to assume that the dress rehearsal was in any way perfect.

Mr. KINCANNON. No.

The dress rehearsal was not perfect in the sense that everything worked perfectly, but that we found out what did and did not work.

Mr. SAWYER. I would suspect that we would all have misgivings about anything that worked perfectly because we must then have made a mistake somewhere along the line.

Mr. KINCANNON. There is no question about that.

Mr. SAWYER. One of the things that the GAO mentioned with regard to that was when they suggested that the value of that dress rehearsal may have been diminished because the Bureau was unable to test fully critical software under census-like conditions.

Could you comment on that evaluation?

Mr. KINCANNON. Yes.

Some software was not prepared in time to use there because Federal procurement is a significant process and we did not have machines identified in that time.

But what we have done in order to test those particular aspects is to set up what is called a Beta site, that is, a place where there is a complete configuration of all the different types of equipment. We will use questionnaires and other bases of information from the dress rehearsal and run through those processes so that we do actually get a realistic test of the software as it is developed.

Mr. SAWYER. Another area of followup from the dress rehearsal is this. Congressman Ridge mentioned the question of undercount of minorities and the poor.

Were you able to discern disproportionate under-counts and were you able to evaluate the coverage of the dress rehearsal in those terms? Have you been able to calculate undercount rates for the dress rehearsal and make assumptions about 1990?

Mr. KINCANNON. No.

We have not completed that calculation or evaluation for the dress rehearsal yet.

Mr. SAWYER. Will that be a part of your analysis that is forthcoming?

Mr. KINCANNON. Yes, sir.

Mr. SAWYER. There is a final series of questions that I wanted to ask you.

You mentioned the automation. I have looked at the TIGER maps and they are enormously impressive. One does not have to be very imaginative to conceive of the enormous range of applications that will be possible once the census is done with.

Mr. KINCANNON. Yes. I think it is very promising.

I hope you also looked at the pre-TIGER maps, so that you can appreciate the difference from the point of view of an enumerator trying to find things.

Mr. SAWYER. My understanding is that there remain some questions about the decision of whether or not it is wise or affordable as you continue in the process of the execution of this census, to correct errors that are found in TIGER maps as we go.

Is there a plan to make corrections on those?

Mr. KINCANNON. We do plan to make corrections.

We will not be updating the data base for TIGER for some ancillary maps; but for what our enumerators are going to be using, those will be updated.

Mr. SAWYER. Will that information be entered into the data base?

Mr. KINCANNON. It will eventually be corrected in the data base.

Am I correct?

Ms. MISKURA. Not as part of the 1990.

Mr. KINCANNON. Not as part of 1990, but post-1990.

Mr. SAWYER. Do you have any idea of when that might take place?

Will they available, for example, on maps that are subsequently offered for other use within the government or without?

Mr. KINCANNON. At some point, but I don't know when.

Do we have a date on that?

Ms. MISKURA. We do not have a definite time.

Mr. KINCANNON. No. I cannot give you a definite time for that.

Mr. SAWYER. Will they most critically be available in the course of the material that is provided to the state legislatures and governors for purposes of redistricting?

Mr. KINCANNON. Why don't you answer.

Ms. MISKURA. The materials that will be produced for the purposes of redistricting are materials that will show—we are updating political boundaries, certainly. So the most current political boundaries will be on those maps.

The other geographic features on those maps are geographic features that we are working with the states to define. So any updates or corrections defined in that process certainly will be on the maps.

So, basically, the redistricting maps will have accurate and up to date geographic information for that purpose.

The kinds of updates that will not appear on the map are the kinds that we use in enumeration, for somebody who is going door to door, for instance, and makes corrections. They are not needed for redistricting purposes.

They are available while we are taking the census. But it will not be part of the 1990 census to enter them into the data base.

Mr. SAWYER. So the data base from which the maps are generated may not include all of the corrections that are found as a product of the enumeration process.

Ms. MISKURA. That's correct.

Mr. SAWYER. Those will, however, at some point be added to the data base that is available throughout the rest of the government and commercially?

Ms. MISKURA. Yes.

That information will be kept and can be entered into the data base after the 1990 census products are done.

Mr. SAWYER. Do you have any sense of how much you will save as a product of not entering those in a more contemporaneous fashion, concurrently with their discovery?

Mr. KINCANNON. About $4 million.

Mr. SAWYER. About $4 million.

How much have you spent overall on the TIGER system?

Mr. KINCANNON. We've spent about $158 million in the development of the system, and we will spend about $80 million on use of the TIGER system for the 1990 census.

Mr. SAWYER. I just wonder whether the qualitative improvements, by including those corrections, might not be worth that additional $3 million to $4 million it would entail.

Mr. KINCANNON. There are many activities in that category, and we have to evaluate those based on what we see in the way of total resources and what needs we have, particularly in something like the pay. We may be able to come back and do that later on.

We are conscious of and concerned, as GAO is, about the pay rate situation. We want to preserve such degrees of freedom as we can until we know how that is going to play out.

Mr. SAWYER. I recognize that it is difficult to know at this juncture, but those prompt decision points will be critical in the course of execution.

Mr. KINCANNON. Yes, sir.

Mr. SAWYER. I would hope that, if there were to be need for adjustment, that adjustments might be more inclusive than just the specific events that may trigger them, for example, salary. The difference in the increment of increase would be marginal, but the potential increase in quality could be substantial. I hope that you get a sense broadly, across this entire subcommittee, that we would be open to that kind of suggestion.

Mr. KINCANNON. I appreciate that.

I am obliged to point out also that the Congress, in the last two fiscal years, has not approved the President's request for the census, and it has cut $65 million out of those requests.

My hearing last week before Congressman Smith was courteous and constructive, as always, but he voiced lamentations about the restrictions that he himself faces and the needs that he faces. I have heard similarly that the Senate Appropriations Subcommittee is concerned. That is a problem that we face.

We will certainly appreciate your support.

It's really an unusual situation, I think. This is not only the proposal of President Reagan but a proposal reiterated by President Bush and shielded from the flexible freeze in his submission. We certainly hope we can at least get the money that we requested.

Mr. SAWYER. Certainly there is always a tension between economy and quality everywhere in government. Those of us who are looking, as all of us are, I am sure, toward the long-term payback in quality from the investment that is made now, can see the potential for false economies that may occur in this critical year.

Mr. KINCANNON. That is important to bear in mind.

Mr. Dodaro mentioned the per household cost of $18, and if you look at that over the decade that we use the census, $1.80 per household is a very worthwhile investment.

We can argue at the margin and certainly we will. But it is a good investment.

Mr. SAWYER. It has been a busy morning across the Congress. I would like to take a moment to welcome a colleague, Congressman Robert Garcia, who has been a real benefit to me in this chair.

I want to thank you for being here.

Do you have any comments or statement?

Mr. GARCIA. First, I apologize to you, Mr. Chairman, for being so late. But the shuttle, with the Eastern strike, is very difficult these days. They have second sections, third sections, and fourth sections, and you sit on the runway for hours.

But that is now over.

I just wanted to be here today because we are getting close to the magic hour again. It seems like ten years go by so very quickly.

There are a couple of questions that I'd like to ask you.

First of all, I understand, Mr. Kincannon, that you are the Acting Director?

Mr. KINCANNON. Actually, I am the Deputy Director. One, under the law, cannot be Acting Director for more than 30 days unless the President were to make a nomination.

Mr. GARCIA. I see.

Are they going to make an appointment in the near future?

Mr. KINCANNON. I have no information on that, sir. I presume they will.

Mr. GARCIA. Well, you know, it really makes a great deal of sense. That is an appointment that I would hope they would expedite because you really don't have any time. I mean, frankly, the ballgame is on. The game has started and the first pitch has been thrown.

Mr. KINCANNON. That's correct. It's too late to decide on a new game plan.

Mr. GARCIA. You have no idea as to when a new director is going to come on-board? No leaks, no rumors? [General laughter.]

Mr. KINCANNON. Well, I'm not sure this is the right place for me to gossip. [General laughter.]

Mr. GARCIA. Then just say yes or no.

Mr. KINCANNON. "Yes or no," yes, sir.

The fact of the matter is that, for the last two census directors, it took about nine months to get them appointed. So that would make it August or September. Perhaps it will be sooner than that.

Mr. GARCIA. Well, I can assure you, Mr. Kincannon, that I think they would be smart to just have you continue to run it because the continuity is there with you. God knows, you know this field as well as anybody else.

Mr. KINCANNON. I certainly appreciate your comment, sir.

Mr. GARCIA. But I am a Democrat, so my endorsement is not going to do you much good. [General laughter.]

I have a couple of things.

Newspapers are now starting to run stories about reapportionment, about the under-count and how it affects urban centers.

Are you making any provisions at this particular moment, not just in the City of New York—I may represent the city, but if anything happens, it's just on a bigger border area, New York; but I am sure the same thing pertains to Los Angeles, Chicago, or anyplace else.

We have the phenomenon of the situation of the homeless. There is no question that in the months of April, May, and June and such times, it is going to be pretty tough to count the homeless because the weather is nice. You know, in the winter, you can generally go into a shelter, and it's pretty well filled to capacity. You know where there is heat, whether it be Grand Central Station, on the grates, or here in the D.C. area. You have a general idea of where to go.

But summertime is a little different because everybody is spread out more. The enumeration generally takes place during that period or time of the year.

Coupled with that phenomenon is that we have the situation as it pertains to the City of New York, where you have two and three families, mostly two families, doubled up in public housing. It is against the law, obviously. You are just supposed to have one

family living there. But there is no place for these people to go. So they move in with a relative.

What provisions are you making to get that count, because nobody is going to volunteer that information? I mean, if they do, they are going to feel that they are in jeopardy.

We had a heck of a time the last time trying to get one family, a single family, to come forward in public housing?

Mr. KINCANNON. We certainly have taken steps, particularly with regard to the homeless, to do as good a job as we can. We have always endeavored to count people who were not housed in a traditional way. But we did not make any special effort in past censuses to identify components of the population that might be described as "homeless."

We don't have a definition of homelessness, and I'm not sure, in fact, that even a very good census would give the best or most useful count or description of the homeless population. But we have changed and improved our procedures over 1980, and, as a matter of fact, we have made further changes in our procedures based on the dress rehearsal in St. Louis.

We are concerned that, as you get into the springtime of the year, more and more of the homeless will be out of shelters. That is one reason why we have taken a slight, but I think appropriate, bit of discretion with regard to the law setting April 1 as the Census Day. Our understanding is that in many areas of the country, shelters close, some temporary shelters close, as of April 1.

So we are going to do our enumeration of the homeless population on March 20 throughout the country. This at least gets us a little bit ahead of that schedule.

Mr. GARCIA. Is there a conflict, Constitutionally, in doing that?

Mr. KINCANNON. Not Constitutionally, although the statute sets April 1 as Census Day. But our view is that this is an appropriate variant from that, and within reason to do.

I don't think anyone has a problem with that.

We will also enumerate basically in three phases. First, we will visit shelters. We have gone to local governments and other sources to make sure that we develop a list of shelters. Then, later that same night, we will count people who are found on the street. Then, finally, very early in the morning, we will try to enumerate people who are living in abandoned buildings by observing people as they leave the buildings in the early part of the morning.

That is an imperfect procedure, but I think it will improve on what we did in 1980.

As a general remark, I believe—and I don't think it is the Census Bureau's task, and I am not sure that we are even best suited to carry out such a thing—but I believe there does need to be discussion and intellectual development about a system to measure the number of people who are homeless, what that definition would be, and so on.

I do not think that a census one time, once every ten years, is the most useful system of data on the homeless.

With regard to doubled up families, that is a problem. It was a problem in 1980, and I expect it will be a problem in 1990. We will do everything we can to make clear to people that a response in the census is safe, that we keep that information confidential, even

if they are doubled up or in some other way living in violation of a technical factor in the law, that that will not and cannot be used against them.

We will work at that through messages on the questionnaires, through separate mailings, by publicity, including publicity in many languages. We are working extensively with groups of grassroots leaders in churches, in community houses and so on, so that the leaders that people really turn to—school teachers, ministers, barbers, or other community activists—will have that message and relay them to them.

I don't know that that will be perfectly successful, but we are concerned about it and trying to get that done.

Mr. GARCIA. Well, you know, you mentioned that you did a lot of that in 1980. The fact is that the situation in the last ten years has just multiplied beyond anybody's dream. The bottom line is that there just has been no housing built, so that means that there are more people in the street.

I would hope that this would really be looked at carefully.

I must tell you that I am still so terribly disappointed in the hearing that we had with the person from the Department of Commerce, with Commerce overruling the former directors go-ahead on the adjustment.

I think that that was probably one of the most embarrassing things that has ever happened to the Bureau of the Census.

I will never forget that. As you know, I have always been a person who has had tremendous confidence in the Bureau because I truly believe you are probably the best statistical agency in the world, and very professional in the way you do things. But that was blatantly political, and I won't forget that.

Mr. KINCANNON. Congressman, I appreciate your confidence. You have been consistent in that and a fan of the Census Bureau.

I am also sensitive that I don't want to be drawn in to a conversation on a matter under litigation, which is very sensitive. But I feel compelled to say that that is somewhat of an oversimplification of the decision process and I would note for the record that the Census Bureau had not decided to adjust census returns, but only to continue along the line of research and development.

Mr. GARCIA. Well, you and I have a very different opinion of that hearing because it was brought forward by the director himself, who said that we were ready to go forward with the adjustment, they needed approval from Commerce, and Commerce turned them down based on conversations with OMB.

Now, we were both at the same hearing, I think, and I think we can pull out the minutes of that hearing and look at it and screen it very carefully.

But I don't want to get into that now. That is not the purpose of this conversation. But I did want very much to have you understand, by talking about the doubled up families, by talking about the homeless, that the adjustments in 1990 become even more important than they were in 1980.

Mr. KINCANNON. Well, I was not at the hearing. I did read the record of the hearing, although I have not read it in many months now.

I would also observe that the process that underlays both our evaluation of coverage and was a component in any potential adjustment method is dependent on essentially the same process, that is, going to the door and asking people: who lives there. It escapes me as to why we are likely to get people living in illegal circumstances to come forward any more with a second try at the same question.

It might even have the effect of convincing people that there is more checking and more to this going on than they thought.

I am not sure that that is a way of perfecting or dealing with that particular problem, whatever else it may have in the way of merits.

Mr. GARCIA. Just let me say, again, that I did not get into the reapportionment aspects of it. But, obviously, that is a major consideration, especially for the Midwestern and Northeastern States.

You know that when you get down to the 434th, 433rd, 432nd, and 431st Members of Congress and what states they are coming from, based on the formula that we use, it gets very tricky. A few thousand in population makes the difference between a state losing or gaining a seat.

In the State of New York, where we had at one time 42 Members, and we have 34 today, the possibility is that in the short span of 20 years, we could probably end up losing a quarter of the delegation from the state. This, again, becomes very important, to make sure the count is accurate and that the count is on target.

I think even more important than reapportionment is how the Federal formulas are in terms of reimbursements to states and localities because those moneys are very essential. Again, a few thousand here and a few thousand there puts states and localities at a different funding level, and that then becomes a problem.

I always remember the City of Memphis, with the problem they had, especially as it pertained to transportation.

So I will be with you. The Good Lord knows that I'll work as hard as I can to get an accurate count.

But I just want to put you on notice that those are major problems and I would like you to know that the Chairman has been kind enough to ask me if we should have a hearing in New York. I have said yes, I would like that as soon as possible.

Now, I would hope that you would be present and members of the Census Bureau because there are some hard questions to be put forth by people from my city as it relates to what is going to happen in 1990.

Having said that, it is good to see you.

Mr. KINCANNON. It's good to see you, Congressman.

Mr. GARCIA. Thank you.

Mr. SAWYER. Just in conclusion and to followup on that, I think it is important to recognize that all of us have shared concerns about the quality of the count, its accuracy, and the way in which those numbers are used. In that light, I think it is fair to say that virtually every Congressman and certainly every local official across the country would be more than pleased to bring the full communicative resources of public office and the forums in which we operate to bear on helping to improve the capacity of the Census Bureau to execute its mandate.

With that in mind, I hope that you will be prepared to share with us in the fullest detail that you can your outreach plans, so that we can find ways to make our efforts compatible with yours.

In conclusion, just let me say that the automated systems that are going into place today are remarkable in the potential that they hold. They are probably no more remarkable, though, than the improvements that were made 100 years ago in the evaluative and enumeration systems that were for the first time probably in the history of mankind, automated to the degree that they were, and which led, virtually directly, to the business machine and artificial intelligence industries that have become global today.

You are still in the forefront and we want to help you stay there.

Mr. KINCANNON. Thank you very kindly.

It is a worthwhile historical footnote, and, given Congressman Garcia's earlier professional background, we used our last hollerith punch card in January. It's all over at the Census Bureau, after 100 years of use.

Mr. SAWYER. Well, if there is no more business to come before the subcommittee, we stand adjourned.

[Whereupon, at 11:38 a.m., the subcommittee was adjourned.]

[The following responses to written questions were received for the record from the Census Bureau.]

**FOLLOW-UP QUESTIONS FOR MR. LOUIS KINCANNON,**
**Deputy Director, Census Bureau**

Question:

Mr. Kincannon, as we enter the most hectic period in conducting the 1990 census, I am sure that we both will be receiving a lot of questions from Members about census procedures and results. Access to this information is extremely important to Members of Congress, who frequently use the results of the decennial census and other surveys you conduct, and who may be questioned by their constituents about numerous issues relating to the census. Can you assure us that Members of Congress, as well as the General Accounting Office and the Library of Congress, will have the full cooperation of your excellent professional staff in obtaining information about census operations and unimpeded access to the results of the census?

Answer:

Over the years, we believe we have established and maintained good working relationships and communication with Members of Congress, the General Accounting Office, and the Library of Congress, and we expect this to continue.

The phrase "unimpeded access to the results of the census" is somewhat troublesome since it could be interpreted quite broadly. Clearly it cannot include access to confidential Title 13 information nor routine access to sensitive data (such as individual employee records). Nor can we grant requests routinely or automatically for special tabulations or analyses of census results, which often could be quite expensive and resource intensive. However, we certainly welcome inquiries from Members of Congress, the GAO, and the Library of Congress which will be handled as responsively and expeditiously as possible.

Question:

As we all know, the Bureau has operated without a Director since the departure of Dr. Keane at the end of last year. Do you believe the absence of a Director has impeded census preparations and activities, or the decision-making process, in any way?

Answer:

Census preparations, activities, and decisions are taking place as needed. We do not believe we have experienced any more difficulties than any agency involved in the transition from one administration to the next.

Question:

Why has the cost of the decennial census increased from $245 million in 1970, to $1.1 billion in 1980, to $2.6 billion in 1990?

Answer:

These numbers are not directly comparable, of course, since they do not account for inflation nor for the increased number of people and housing units over time. For example, we expect there will be 23% more people and 56% more housing units in 1990 than there were in 1970. Accounting for this and for inflation, the cost of the census has risen only by a factor of 2 or 3 since 1970, not the ten-fold increase implied in your question. The increases not due to inflation and increased workload can be attributed to a number of inter-related factors over the last 19 years:

- Increased uses and reliance upon census data for billions of dollars of formula-based funds distribution by Federal, State, and Local governments (for example, General Revenue Sharing and Block Grants)

- Increased use of census data for redistricting purposes, requiring earlier and additional geographic and tabulation efforts by the Census Bureau

- Increased interest and demands for earlier, more extensive, and more accurate results from the census.

- Expanded efforts to include the American public, their representatives at all levels of government, and data users in planning the census to make it as useful as possible.

- Increased difficulties in recruiting temporary staff for census activities due to changes in the work force.

- Increased difficulties in enumerating the population, due to such things as fewer people being home during working hours and lower cooperation rates with survey and census efforts in general.

To respond to these additional needs, concerns, and pressures both within and outside the Census Bureau, the level and complexity of efforts to take a decennial census have increased over time, as has the level of funding needed to implement these efforts.

Question:

In your testimony, you state that you do not expect factors outside your control, such a low mail return rates, to increase costs. Has the Census Bureau developed a contingency plan, as recommended last year by the General Accounting Office, in the event that unexpected events do occur? If so, will you share this plan with the subcommittee?

Answer:

We still are in the process of developing contingency plans for a specific list of potential problems or unexpected events. When these are available, we will be happy to share them with the subcommittee.

However, we have recognized potential problems and have taken steps to reduce our risks. For example, we have taken a number of steps to achieve or even exceed the estimated rate for mail response. These include a wide range of publicity and outreach efforts to encourage participation; a motivational message included with each questionnaire; toll-free telephone assistance numbers; and the like.

Question:

It is always possible that certain assumptions the Bureau has made on how the census will progress will not be met. For example, the mail return rate may be lower than expected or the number of housing units may be higher than expected, resulting in more follow-up work. You have indicated that if circumstances change, the Bureau most likely will shift resources within the census before asking for additional funds.

a. What areas of census operations do you foresee would be affected by such shifts?

b. Can you assure us that the accuracy, timeliness, availability, or comprehensiveness of census data and reports will not be reduced if a shift in resources during the census becomes necessary?

Answer:

As mentioned in the previous answer, the precise actions we take will depend on the nature, magnitude, and timing of the problem. Since the legal mandates for the census require us to provide reapportionment data by December 31, 1990 and redistricting data by April 1, 1991, we would endeavour to preserve schedules and resources needed to meet these requirements. Thus, activities not directly related to these efforts would be those most likely to be affected. These would include activities related to assuring the quality of the characteristics data; delaying or reducing sample data; research into the accuracy of the census results; and promoting the importance of the census.

Given the above, then, we cannot provide absolute assurance that unexpected events will not affect the timeliness and availability of some census data products.

Question:

With severe escalation of census costs from decade to decade, how does the Census Bureau plan to carry out the census in the year 2000 without spending $5 or $6 or more billion, as the trends would indicate?

Answer:

"Severe escalation of census costs" seems to be based on an analysis that does not account for increased workloads, inflation, or the significant increased use and value placed on decennial census data over the past decades. Costs have gone up, but so too has the importance of the census to all levels of government, businesses, and the academic sector.

Given our experiences with 1990 planning, we determined that an earlier start for planning the 2000 census was needed. Thus, we have established a 21st Century Staff (TCS) to assess emerging trends in technology, society, government, and other areas, so that we would have more time to effectively test equipment, procedures, and methodologies. Early planning for the 1990 census did not begin until late 1993, but the TCS has now been in place for over a year. A major emphasis of the planning effort is to ensure costs are kept under control.

Question:

You indicated in your statement that hiring the large number of temporary workers needed to carry out the census will be a challenge. Recognizing that the Bureau faces a diminished labor pool for 1990, what actions has the Bureau taken to increase the number of qualified applicants and minimize turnover rates?

Answer:

We have designed our recruiting program to obtain a sufficient number of qualified candidates to fill approximately 480,000 census jobs. These employees will reflect the characteristics of the labor force in the area, and they will be assigned to work in areas where they reside. Our program involves working directly with a wide range of organizations including national and local private-sector and public-sector organizations, as well as increased media efforts.

In areas where we experience recruiting problems, other efforts will include mailing post cards to households in the area to advertise the availability of census jobs.

Since 1980 we believe we have taken a number of positive steps to identify and alleviate turnover problems. We believe the use of supplemental pay will help. We believe we have improved training materials and job aids so that enumerators are better equipped for their job. We also believe motivational training sessions and daily contact with supervisors will reduce problems and frustrations of these positions.

Question:

On page 4 of your prepared statement, you discuss two analyses of alternative pay plans -- the first relating to a pay increase instituted during prelist operations, and the second relating to the use of geographic pay rates. What is your target date for establishing final pay rates for 1990?

Answer:

We will complete our analyses and establish final 1990 pay rates this spring as we formulate final FY 1990 operating plans.

Question:

You mentioned your plan to use supplemental pay for temporary field staff, based on your experience in the Dress Rehearsal. Could you explain in more detail the concept of supplemental pay and why no explicit costs are involved? Also, could you tell us when the Bureau plans to complete its analysis of the Dress Rehearsal experience with supplemental pay?

Answer:

There are no explicit costs involved; the approach largely just redistributes basic pay. During training, the workers receive only minimum wage. If they stay on the job long enough and meet quality standards, they receive the supplemental pay which makes up the difference between minimum wage and our basic pay rates for the time they were in training.

Based on preliminary data, and the fact that most of the large field operations for the dress rehearsal were completed on time and within budget, we believe that supplemental pay was an important part of our overall plans to minimize turnover and complete operations on time.

Most of the evaluation data are available, but it is being considered along with other proposals about geographic-based differential pay rates as we finalize our pay plans for 1990. These are being evaluated to refine eligibility requirements by position, including measures of quality, productivity, and turnover.

Question:

What steps is the Bureau taking to ensure that bilingual enumerators are assigned to areas where language barriers are a problem, such as in Hispanic and Asian American communities?

Answer:

By setting the goal of hiring persons indigenous to the area they work in, we expect to meet most language needs. In areas with large populations of non-English speaking persons, a skill in the foreign language will be a factor in selecting enumerators. We

also attempt to hire as many persons as possible with language skills for office work, such as telephone assistance. To help identify possible sources and referrals for such persons, we are taking a number of steps at both national and local levels.

In addition to hiring bilingual enumerators, we are taking many other steps to assist those with language barriers. For example, in selected areas of the country with large concentrations of foreign language speakers, we will mail out an Early Alert Flyer just before Census Day. This flyer will explain the purpose of the census and provide special toll-free 800 phone numbers to call for foreign language assistance. The information will be printed in English and 7 Asian languages. Each will have a separate 800 number.

We will have foreign language questionnaire guides available in 33 different languages, and walk-in assistance centers will be set up in communities with concentrations of foreign language speakers. "Were You Counted" forms will be placed in foreign language newspapers, and these forms also will list the special toll-free telephone numbers.

The Hispanic Chamber of Commerce project has been designed to obtain promotion and recruiting assistance from the Chamber and its affiliations. Under the auspices of the Ad Campaign contract, Castor International will develop a special ad campaign for the Hispanic population. We also plan to have a similar campaign for Asian and Pacific Islanders, with an ad campaign designed by Muse-Codero-Chen.

Question:

What do you think are the major improvements in census procedures that you introduced between 1980 and 1990? How will these improvements affect the accuracy of census data? Make the census more efficient? Improve the timeliness and availability of census reports?

Answer:

Improvements for 1990 fall into a number of categories:

- Earlier planning - We had about two additional years of planning for the 1990 census compared to the 1980 census, and two more major tests. This allowed more opportunity to develop, test, evaluate, and refine procedures for 1990.

- Promotion/Outreach/Publicity - We have significantly increased our efforts in this area since 1980. To the extent we can increase cooperation, involvement, and trust in the census, we should see improvements in mail response rates, coverage, and data quality.

- Joint ventures with local officials - Increased involvement at the local level should also improve cooperation, involvement, and trust in the census. Improvements in the local review program; the Mayor's Project; other regional meetings with elected officials; and new liaison programs for American Indians and Alaska Native Villages are some of the major efforts in this arena.

- Efforts to increase mail-response rate - To the extent we can obtain a high mail response rate, we will avoid significant costs for personal visit nonresponse follow-ups. Some of the new or expanded efforts here include the use of a mail reminder card; a motivational insert in the questionnaire package; increased foreign-language assistance; increased promotion; and more cooperative activities with local officials.

- Address List Compilation and Questionnaire Delivery - Various efforts have been made to improve the completeness of our address control lists and to ensure more complete and accurate delivery of questionnaires. These include improved Precanvass procedures; the use of an early postal check in Prelist areas (followed by a field operation to ensure accurate incorporation of postal results into our files); and the use of Update/Leave for areas where we have difficulty compiling addresses that can be used for accurate postal delivery of questionnaires. The use of automation to keep track of the status of each individual questionnaire also will improve control over these processes.

- Training, Pay, Management - Efforts in this area include improved training; more on-the-job training; job aids; more and tighter supervision/review of daily work; and supplemental pay programs to reduce turnover and encourage productivity, quality, and timeliness.

- Automation - We have greatly increased the use of automation during the actual collection and processing phases of the census since 1980. With 520 mini-computers in our district offices, regional census centers, and processing centers, we will have much better control, consistency, and timeliness compared to the many paper and pencil processes used here in previous censuses. Other improvements include the use of laser sorters and bar code wands for questionnaire check-in; an automated management information system to rapidly track progress and costs of all activities in the various offices; and the ability to begin conversion of questionnaire data to machine-readable form at least 3 months earlier than in 1980, thus contributing to the ability to get data products out sooner.

- Geography - The development of the TIGER System to support a variety of Bureau activities has provided a number of benefits for the census, including more legible and usable maps as well as consistency of geographic reference materials. These have gone a long way towards addressing problems with geographic products that led to errors and inconsistencies in the 1980 census.

- Content of the questionnaires - Various efforts since 1980 should improve the ability of the public to correctly respond to census question. These include tests to improve wording/response accuracy; the use of walk-in assistance centers, toll-free telephone assistance, foreign language guides, and bilingual enumerators; improved training for enumerators to assist respondents; and the use of automation for some editing of forms and in assigning codes to write-in responses.

Question:

You referred in your testimony to your extensive outreach and publicity campaign during the 1988 Dress Rehearsal. Could you tell us in more detail what this campaign involved? Has the Bureau evaluated the effectiveness of the Dress Rehearsal outreach campaign, to determine whether your efforts are on target or not?

Answer:

The Dress Rehearsal Outreach and Publicity Program included standard, successful approaches and also introduced innovative efforts. The standard apprqaches included a generalized ad campaign under the auspices of the Ad Council as well as the Census Awareness and Products Program designed to initiate outreach and publicity efforts at the local level.

Some of the innovative approaches included:

- Targeted public service messages for the Black population.
- Hiring residents of public housing complexes to conduct outreach and deliver questionnaires in the complexes.
- Mailing a motivational/informational flyer written in five languages to pre-designated areas prior to questionnaire delivery.
- Distributing Census Community Action Guides to community leaders to provide an overview of the census and to suggest ways the leaders could help promote the census.
- Implementing an agreement with the National Head Start Bureau to have local centers conduct such activities as parent workshops on completing the questionnaire; a telephone campaign; and the distribution of flyers.

Both better-than-expected mail response rates and the results of a Gallup Survey of census awareness confirm our belief that these efforts were successful. Although some fine-tuning of procedures are taking place, overall we believe these approaches will work well.

Question:

What are the major areas of experimentation that you are including in the 1990 census to help prepare you to do a better job in the year 2000?

Answer:

Our Research, Evaluation, and Experimentation Program (REX) will encompass various content, coverage, and processing studies to provide a wide range of information to help plan future censuses. The program includes the Post Enumeration Survey and related efforts to evaluate the coverage and sources of coverage error in the census; various content studies to help improve questionnaire design, wording, and response accuracy; specific evaluations of various coverage improvement operations; and evaluations of outreach and automated coding activities.

Question:

In 1986, the Census Bureau made public a proposed schedule for the release of certain data products from the 1990 census. Has this schedule been finalized and does the Bureau anticipate any problems adhering to this schedule?

Answer:

We used the 1986 data product development schedule as a framework for designating the release date for each 1990 data product. Detailed release schedules will be available to the public this summer in our publication "1990 Decennial Census Tabulation and Publication Program." We anticipate no problems in adhering to the schedule; however, delays or unforseen problems in data collection/processing; unexpected costs; or budget cuts could modify the schedule.